

Board Characteristics and Firm Performance:  
Evidence from New Zealand

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## **ATTESTATION OF AUTHORSHIP**

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I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Hanoku Bathula

18 February 2008

## **DEDICATION**

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I wish to honour the memory of my beloved mother by dedicating this thesis to her. Even though I was only 13 years old when I lost her, her influence has been lifelong and has shaped my aspirations and goals. I also dedicate this thesis to my dear father who, since my mother's passing, has taken care of both me and my sister and guided us with prayers and perseverance.



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*He has made His wonderful works to be remembered;  
the Lord is gracious and full of compassion.  
(Psalm 111: 4)*

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## ABSTRACT

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Due to various corporate scandals and failures, there has been a renewed interest on the role of boards in the performance of firms. This thesis examines the relationship between the key board characteristics and firm performance. Unlike most studies on boards which predominantly use only financial variables affecting governance, I take a different approach by combining them with non-financial variables. This combined set of variables is used for theoretical and empirical modelling.

Based on the extant literature, I develop a conceptual framework and a set of hypotheses to examine the relationship between board characteristics and firm performance. Board characteristics considered in this research include board size, director ownership, CEO duality, gender diversity, educational qualification of board members and number of board meetings. Additionally, I use board size as a moderating variable to examine how the effect of other board characteristics is contingent on board size. Firm performance is measured by return on assets.

I test my hypotheses on a longitudinal sample of 156 firms over a four year period from 2004 to 2007. My sample includes all firms listed on New Zealand stock exchange as on November 2007. Empirical analysis is undertaken using Generalised Least Squares analyses.

The findings of the study show that board characteristics such as board size, CEO duality and gender diversity were positively related with firm performance, where as director ownership, board meetings and the number of board members with PhD level education was found to be negatively related. Board size was found to be moderating some of these relationships, indicating the critical role being played by board size in the

design and role of corporate boards. The findings also provide partial evidence to different governance theories, further indicating the need for theoretical pluralism to gain insights into boards' functioning.

The study contributes to the understanding of board-performance link by examining both the traditional variables such as board size, CEO duality, number of board meetings as well as other organisational attributes such as gender diversity and competence variables represented by women and PhD holders, respectively. The theoretical framework and the findings of my thesis are expected to stimulate scholars for further research to identify the contingency conditions upon which the board characteristics and firm performance may be dependent.

# CHAPTER 1

## INTRODUCTION

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### 1.1 Overview

The contemporary business environment is characterised by uncertainty and risk, making it increasingly difficult to forecast and control the tangible and intangible factors which influence firm performance (Bettis & Hitt, 1995; Kuratko & Morris, 2003). Customers are becoming more demanding, necessitating increased focus on managerial professionalism and quality of service delivery (Lai & Cheng, 2003). In response to the external pressures, firms resort to different strategic responses such as restructuring, downsizing, business process reengineering, benchmarking, total quality management, management by objectives etc., to improve and sustain their competitive positions (Mangenelli & Klein, 1994; Jacka & Keller, 2002).

In a dynamic environment, boards become very important for smooth functioning of organisations. Boards are expected to perform different functions, for example, monitoring of management to mitigate agency costs (Eisenhardt, 1989; Shleifer & Vishny, 1997; Roberts, McNulty & Stiles, 2005), hiring and firing of management (Hermalin & Weisbach, 1998), provide and give access to resources (Hillman, Canella & Paetzold, 2000; Hendry & Kiel, 2004), grooming CEO (Vancil, 1987) and providing strategic direction for the firm (Tricker, 1984; van der Walt & Ingley, 2001, Kemp, 2006). Boards also have a responsibility to initiate organisational change and facilitate processes that support the organisational mission (Hill, Green & Eckel, 2001; Bart & Bontis, 2003). Further, the boards seek to protect the shareholder's interest in an increasingly competitive environment while maintaining managerial professionalism and

accountability in pursuit of good firm performance (Ingley & Van der Walt, 2001; Hillman & Dalziel, 2003; Hendry & Kiel, 2004; McIntyre, Murphy & Mitchell, 2007).

The role of board is, therefore, quite daunting as it seeks to discharge diverse and challenging responsibilities. The board should not only prevent negative management practices that may lead to corporate failures or scandals but also ensure that firms act on opportunities that enhance the value to all stakeholders. To understand the role of board, it should be recognised that boards consists of a team of individuals, who combine their competencies and capabilities that collectively represent the pool of social capital for their firm that is contributed towards executing the governance function (Carpenter & Westphal, 2001). As a strategic resource, the board is responsible to develop and select creative options in advancement of the firm. Given the increasing importance of boards, it is important to identify the board characteristics that make one board more effective from another. This dissertation seeks to identify and examine the board characteristics that make it effective and contribute towards firm performance.

## **1.2 Importance of Boards**

Almost all the work in the area of corporate governance starting with Adam Smith (1776) to different theories viz., agency, stewardship, resource dependence and stakeholderism has highlighted the importance of boards. Adam Smith (1776), in his landmark work, *The Wealth of Nations*, suggested that a manager with no direct ownership of a company would not make the same decisions, nor exercise the same care as would an owner of that company. This view is in line with the agency theory proposed by Berle and Means (1932) and Jensen and Meckling (1976). According to agency theory, when there is separation of management and ownership, the manager (i.e., agent)

seeks to act in self interest which is not always in the best interests of the owner (i.e., principal) and departs from those required to maximise the shareholder returns. This agency problem can be set out in two different forms known as adverse selection and moral hazard (Eisenhardt, 1989). Adverse selection can occur if the agent misrepresents his ability to perform the functions assigned and gets chosen as an agent. Moral hazard occurs if the chosen agent shirks the responsibilities or underperforms due to lack of sufficient dedication to the assigned duties. Such underperformance by an agent, even if acting in the best interest of the principal, will lead to a residual cost to the principal (Jensen & Meckling, 1976). These costs resulting from sub-optimal performance by agents are termed as agency costs.

In order to deal with agency costs, a principal will establish controls and reporting processes to regularly monitor agent's behaviour and performance outcomes (Fama, 1980; Jensen & Meckling, 1976; Shleifer & Vishny, 1997). However, the degree of information asymmetry between principal and agent decides the effectiveness of the monitoring mechanism. Agency theory has been very popular in explaining the role of boards in mitigating the agency costs (Berle & Means, 1932; Jensen & Meckling, 1976; Fama & Jensen, 1983). Other theoretical perspectives such as stewardship, resource dependency and stakeholder theories also enhance our understanding of the role of boards (Hillman & Dalziel, 2003; Hendry & Kiel, 2004; Freeman, Wicks & Parmar, 2004). Stewardship theory views agents as stewards who manage their firm responsibly to improve the performance of the firm (Donaldson & Davis, 1991; Muth & Donaldson, 1998). Resource dependency theory considers agents (management as well as the board) as a resource since they would provide social and business networks and influence the environment in favour of their firm (Pearce & Zahra 1992; Johnson, Daily & Ellstrand, 1996; Carpenter & Westphal, 2001). Stakeholder theory expects boards to take into

account the needs of an increasing number of different stakeholder groups, including interest groups linked to social, environmental and ethical considerations (Freeman, 1984; Donaldson & Preston, 1995; Freeman et al., 2004). Appreciation of different theoretical perspectives will give insights into the contribution of boards to firm performance.

Awareness about the role of boards and governance was created by the activism of the California Public Employees' Retirement System (CalPERS) among the US based firms. CalPERS demanded appointment of non-executive (or independent) directors to the boards. It also targeted SMEs through relation investment, (e.g., by becoming the director of the board), and taking a large stake in high growth companies (Carlsson, 2001). Based on their experience, CalPERS had developed a standard set of corporate governance guidelines in 1999. The Teachers' Insurance and Annuity Association – College Retirement Equities Fund (TIAA-CREF), issued policy guidelines in 1994 and then revised them in 1997 and again in 2000 (Hann, 2001). After the Enron episode, the US government has enacted The Sarbanes-Oxley Act of 2002, which enjoins the boards to ensure adherence to regulations and organisational performance standards leading to transparency and integrity. The penalties for non-compliance are targeted to improve the oversight function of the board (Moeller, 2004).

Other countries also evinced keen interest on the role of boards and governance. For example, the UK commissioned different reports to make boards and governance effective. These include Cadbury report on the financial aspects of corporate governance (1992), Greenbury report on directors' remuneration (1995), Hampel report on corporate governance (1998), Turnbull report on guidance for directors (1999), Higgs report on role and effectiveness of non-executive directors (2003), Tyson Report on recruitment and development of non-executive directors (2003) and Combined Code on corporate governance (2003). Italy has issued Preda Code (2002) for self regulation by listed firms



while South Africa released King Report on corporate governance (2002). CLSA, a Hong Kong based investment banker, started publishing a regular report on Corporate Governance in collaboration with Asian Corporate Governance Association (ACGA) since 2000 (CLSA virtual office, n.d.). This report covers all major firms in the Emerging Markets of Asia, Latin America, Europe, Middle East and Africa.

International organisations such as Organisation for Economic Cooperation and Development (OECD) and International Corporate Governance Network (ICGN) have also developed guidelines for corporate governance with focus on the role of boards. ICGN has provided a forum to facilitate international dialogue for major institutional investors, investor companies, financial intermediaries, academics and other parties interested in the development of global corporate governance practices (ICGN, 1999). The OECD first released a publication titled 'Principles of Corporate Governance' in 1998 and revised it in 2004. These principles stressed the importance of corporate governance for long-term economic performance and strengthening of international financial system. These principles have become signposts for corporate governance, board structures and practices, and are being widely endorsed by various organisations, including G-7 countries, International Monetary Fund, the World Bank, the United Nations and other international organisations (ICGN, 1999). Carlsson (2001) has undertaken an in-depth review of various corporate governance principles and codes in several countries and opined that the common denominator of all these codes and principles is their emphasis on the importance of an independent and competent board.

A strong board can play a very crucial economic role in firm performance. They can provide link between the firm and its environment, secure critical resources (Williamson, 1996; Hillman et al., 2000) and play an active role in a firm's strategic decision making (Fama & Jensen, 1983, Davies, 1999; Kemp, 2006). Another important

role of boards is to act as a mechanism of internal governance and monitoring of management (Barnhart, Marr & Rosenstein, 1994; Shleifer & Vishny, 1997). By performing these roles, an effective board is likely to help the firm achieve superior performance (Hawkins, 1997; Gompers, Ishii, & Metrick, 2003). The critical role a board plays in the success of a firm merits an in-depth research on different factors that link a board to a firm performance.

### **1.3 Renewed focus on Boards**

Recent focus on the board has accentuated due to two key factors. First, the East Asian Financial Crisis of 1997 affecting the economies of Thailand, Indonesia, South Korea, Malaysia and the Philippines. The financial crisis revealed lack of effective monitoring mechanisms and governance practices leading to disaster in many companies (Radelet & Sachs, 1998). Second, the corporate scandals in different countries such as Enron, WorldCom, Tyco International in the United States, HIH insurance in Australia, Parmalat in Italy and Air New Zealand's disastrous experience with Ansett Australia highlighted the inadequate role played by the boards and failure of corporate governance processes (France & Carney, 2002; Weekend Herald, 2003, Economist, 2003; Lockhart, 2004). The public disquiet after the Enron collapse led to enactment of 'The Sarbanes-Oxley Act 2002' in the US (Moeller, 2004) and similar regulations (e.g., stock exchange rules or codes) in many other countries. The objective of these regulations has been to improve the effectiveness of boards and other corporate governance practices.

Several developments in other areas also contributed to renewal of interest in understanding the role of board and top management. First, there has been a deep sense of dissatisfaction amongst shareholders regarding the poor performance of corporations,

raising questions regarding the competency of the boards, corporate greed and falling shareholder value (Sherman & Chaganti, 1998; Vint, Gould & Recaldin, 1998). Second, there has been a phenomenal growth in the number of institutional investors such as pension funds, mutual funds, banks, and insurance companies, who have the necessary resources and expertise to perform their fiduciary duty of ensuring good returns by monitoring the board decisions (Hawkins, 1997; Sherman & Chaganti, 1998; Becht, Bolton, & Roell, 2005). Third, there has been an increasing realisation on part of corporations that a good board is a source of strength in several ways such as attracting investment capital, improving valuations and share price performance, and providing better long-term shareholder returns (Vint et al., 1998; Lee, 2001; Carlsson, 2001). Good governance practices are now recognised to serve as source of economic growth (Healy, 2003).

#### **1.4 Past Studies on Board Performance**

Review of extant literature reveals a large number of studies examining the role of boards on firm strategy and performance. For example, Lorsch and MacIver (1989), Daily and Dalton (1997), Muth and Donaldson (1998), Bhagat and Black (1999), Forbes and Milliken (1999), Kula (2005) and Gabrielsson (2007) have covered aspects such as board composition, characteristics, and their impact on firm performance. The literature has identified the transparency, independence of the board, Chair-CEO separation, board diversity, board remuneration, alignment of interests through shareholding, and active participation of strategic decision making as the key factors to increase the effectiveness of boards.

Many other aspects of the board are also considered by other scholars. Some examples include separation of the board chair and CEO positions (Lorsch & MacIver, 1989; Daily & Dalton, 1997), non-executive directors (Bhagat & Black, 1999; Roberts et al., 2005), interlocking directorates and director selection (Zajac & Westphal, 1996; Kiel & Nicholson, 2004), interlocked firms and executive compensation (Hallock, 1997; Geletkanyez, Boyd & Finkelstein, 2001), director ownership (Bhagat, Carey & Elson, 1999; Kapopoulos & Lazaretou, 2007), women on the boards (Burke, 1997; Singh & Vinnicombe, 2004; Huse & Solberg, 2006), performance assessment of board (Lorsch, 1997), and external networks on the board decision making processes (Carpenter & Westphal, 2001).

Studies related to the impact of board characteristics on firm performance are not conclusive in nature. For example, Dalton, Daily, Ellstrand & Johnson (1998), Weir and Laing (1999) and Weir, Laing & McKnight (2002) find little evidence to suggest that board characteristics affect firm performance. However, other studies have found a positive relationship between certain characteristics of board and firm performance (Bhagat & Black, 1999; Kiel & Nicholson, 2003; Bonn, 2004). Nevertheless, the role played by the board is critical to firm performance as the boards discharge their fiduciary responsibilities of leading and directing the firm (Abdullah, 2004).

Until last decade, the focus on boards and corporate governance in New Zealand has been limited, though few firms such as Air New Zealand (Riordan, 2001; Lockhart, 2004), Fonterra (Stevenson, 2002) and Tranz Rail (Graham, 2003) came under severe scrutiny by shareholders and regulators regarding the role of boards. A general lack of attention could be due to the limited number of big businesses operating locally. However, in the last few years, studies were undertaken on the role of boards in New Zealand (e.g., Hossain, Prevost & Rao, 2001; van der Walt & Ingleby, 2001; Prevost, Rao

& Hossain, 2002; Healy, 2003; Chiu and Monin, 2003; Marsden & Prevost, 2005). While Hossain et al. (2001) focused on impact of Companies Act 1993 on board composition, van der Walt and Ingley (2001) examined the competencies and skills of the directors necessary for board effectiveness. Prevost et al. (2002) looked into the effect of board composition and firm performance by using secondary data but it was dated, as it relates to a period prior to 1997. Other studies on board include those relating to not-for-profit firms (Kilmister, 1989, 1993), important board issues from fund managers' perspective (Chiu & Monin, 2003), and impact on financial derivatives (Marsden & Prevost, 2005).

Healy's study (2003) of corporate governance in New Zealand has increased awareness about the role of boards by pointing to the failure of boards of various firms in New Zealand in creating a meaningful and sustainable shareholder wealth compared to other countries, including Australia. While conceding that boards in New Zealand firms are good at compliance standards, Healy argues that what matters is the level of performance in order to create wealth. Prominent ills faced by New Zealand firms as identified by Healy (2003) are:

- lack of commitment by directors to creation of shareholder wealth,
- remuneration mainly linked to size of the company rather than its performance,
- lack of adequate institutional shareholder activism,
- high proportion of dividend payments rather than reinvestment in research and development.

In order to improve boards' performance, the Institute of Directors in New Zealand has released code of practice for directors and the book titled 'Directors Responsibilities – a working guide for New Zealand directors' to guide directors in performing their duties in accordance with New Zealand's legal requirements and the

Institute of Directors' standards. Further, the New Zealand Securities Commission has proposed a set of nine principles and guidelines on best corporate governance practices (NZ Securities Commission, 2004). Though these principles are used by many firms, they are non-binding in nature and the impact of these principles on New Zealand firms is yet to be examined. Forbes and Miliken (1999) observes, "understanding the nature of effective board functioning is among the most important areas of management research" (p. 502). Insights into the board characteristics and its impact on firm performance will facilitate efficient allocation of resources within firm and consequent improvement in firm performance.

## **1.5 Motivation for Research**

The current study aims to examine the relationship between board characteristics and firm performance with respect to listed firms in New Zealand. Evidence of relationship between characteristics of board composition and firm performance, or lack there of, will enable firms to make appropriate choices about board appointments to create and improve firm value. The main reasons for undertaking this study are discussed below.

First, internationally there is a growing recognition of the importance of boards for the success of a firm. Several countries have issued guidelines and recommendations for best governance practices and board composition (Cadbury, 1992; OECD Principles, 1999; ICGN Principles, 1999; Preda Code, 2002; Higgs Report, 2003, Combined Code, 2003). However, whether firms following the best practice recommendations regarding board characteristics will indeed perform better is a question to be examined empirically in the New Zealand context.

Second, New Zealand Securities Commission (NZSC) has released a hand book of nine principles and guidelines in 2004 for directors, with the suggested implication that adherence to these guidelines by boards will improve firm performance (NZSC, 2004). Even though the NZSC handbook is not binding on New Zealand firms, compliance is expected at least by firms listed in the stock exchange. Since the sample of the firms chosen for the current study comes from New Zealand, it provides opportunity to examine linkage between board characteristics and firm performance in the New Zealand context.

Third, board diversity was posited to add value to firms. However, the issue of board diversity, specially arising due to gender diversity has not received enough attention. This study examines the impact of both women board members and PhD level educational qualification of board members on firm performance. To the best of my knowledge, no empirical study has been undertaken to examine impact of gender diversity on performance of New Zealand firms. This study seeks to fill these gaps.

## **1.6 Method of Study**

The study investigates the association between various board characteristics and organisational performance with the help of secondary data drawn from publicly available data sources accessible to the students and staff at Auckland University of Technology. Specifically, the study is based on data of firms listed on New Zealand Stock Exchange, covering four years from 2004 to 2007. While the data relating to firm performance was collected from New Zealand Stock Exchange Deep Archive database, data relating to board variables has been collected from companies' annual reports. The collected data was also compared and verified with another database called DataStream.

## **1.7 Contribution of the Study**

This study contributes to the body of knowledge in several ways:

First, results from this research provide an appreciation of relationship between board characteristics and firm performance. Acquiring such evidence will enable firms to gain the benefits of a strategic board. As the costs of meeting governance requirements are considerable, the outcome of this study has the potential to benefit the businesses, policy makers, professional bodies, and the wider community.

Second, not all boards are alike. While boards are the main tool of internal governance mechanism, their efficacy may vary depending on the board characteristics. Agrawal and Knoeber (1996) argue that, given an opportunity, firms will make optimal choices regarding the use of internal mechanisms. However, with pressures for conforming to prescriptive characteristics based on codes and best practices, it will hinder use of optimal choices and make it difficult to identify cause of internal failings. Healy (2003) points out that inadequacy of appropriate board and governance processes is one of the main reasons for low shareholder wealth and lagging economic development. The results from this study show the importance of gender diversity and CEO duality for New Zealand firms, which are smaller compared to their counterparts in the western world. So, unquestioning compliance to different codes and principles elsewhere may not be appropriate to New Zealand firms. They may have to be customised based on specific needs of New Zealand context. The results will also benefit firms of many other countries which are similar to New Zealand with smaller firms. Overall, the results will guide firms to make appropriate decisions regarding composition and appointment of board of directors.



Third, while Van der Walt and Ingley (2003) have suggested a framework for assessing board dynamics, this study is able to empirically examine the relationship between many board variables and firm performance. In particular, the study enhances our understanding of the boards by examining the effect of moderating and control variables on the board process (Finkelstein & Mooney, 2003; Letendre, 2004; Carpenter, Geletcanycz & Sanders, 2004; Pye & Pettigrew, 2005).

Finally, the study examines the effect of gender diversity and PhD level educational qualification of board members on firm performance. This is the first such study in New Zealand that has empirically examined the variables of gender diversity and higher education in board studies. These findings are useful to practitioners when they design the corporate boards.

## **1.8 Outline of the thesis**

The thesis consists of six chapters. Chapter one gives an overview of the study and explains the importance of the study. It also discusses the motivations for undertaking the study and the contribution it makes to the body of knowledge.

Chapter two provides detailed review of relevant literature. It first discusses the role of boards in strategy. Then the chapter delineates different theoretical perspectives relating to boards and integrates them. Finally this chapter discusses the literature related to board characteristics and firm performance.

Chapter three presents the conceptual framework and hypotheses for explaining the relationship between board characteristics and firm performance.

Chapter four gives the methodology adopted for this research, along with the research design. It describes the sample, data collection, variables and the statistical tools

used for data analyses. The last section of this chapter discusses the privacy considerations surrounding collection of data.

Chapter five presents the results of this study and implications for theory development, professionals and policy makers.

Chapter six concludes the thesis by summarising the main findings and the contributions for practitioners and academia. This chapter also identifies the limitations of the current study and concludes with a set of recommendations for future research.

## CHAPTER 2

### LITERATURE REVIEW

---

#### 2.1 Introduction

This chapter reviews literature relating to corporate boards and firm performance. The literature review has been organised in the following sections. First section will discuss the strategic role of boards and how the boards affect firm performance. The second section will review and summarise perspectives of popular theories relating to boards' effect on firm performance. The third section will identify the specific board characteristic that affect firm performance.

#### 2.2 Strategic Role of Boards

Strategic decision making is central to firm performance. Mintzberg, Raisnghani and Theoret (1976) refer to a strategic decision as one which is “important, in terms of the actions taken, the resources committed, or the precedents set” (p. 246). Strategic decisions are not the day-to-day decisions, rather they include infrequent decisions taken by the top management of the firm, which have a direct bearing on a firm's survival and health. Eisenhardt and Zbaracki (1992) considered strategic decisions crucial for a firm's future course. Strategic decisions are concerned with fundamental issues such as location, products, financing and timing and all these aspects will determine survival and success or failure of a firm.

From organisational perspective, the board can be reckoned as a team brought together to work towards achieving organisational goals (Langton & Robbins, 2007). Being placed in a hierarchy above the chief executive and other managers, the board plays

a strategic role in the firm's decision making. Composition of board and the competencies it possesses are important organisational resources (Ljungquist 2007). Such resources become a source of competitive advantage for firms and help them achieve superior performance (Prahalad & Hamel, 1990; Barney 1991; Hamel & Prahalad, 1994; Hunt, 2000). Team composition and characteristics are therefore important precursors to effective group decision making and firm performance.

Scholars have used many different theoretical perspectives to evaluate the effect of board characteristics on firm performance. However, a common aim of different theories has been to establish a link between various board characteristics and firm performance (Kiel & Nicholson, 2003). Importance of boards in corporate governance studies was underscored by Monks and Minnow (1995) who refer to corporate governance as the relationship amongst shareholders, the board of directors, and senior management, and how the strategic decisions that are critical for the success of a business are arrived at. Boards were also the focus of attention by different corporate governance codes issued as a guide to practitioners. According to Carlsson (2001) the central issue of all corporate governance codes is the importance of an independent and competent board. Monks and Minnow (2004), observe, "in essence, corporate governance is the structure that is intended to make sure that the right questions get asked and that checks and balances are in place to make sure that the answers reflect what is best for the creation of long-term, sustainable value" (p. 2). A vital component of this structure is the board membership, its constitution and its function, with a significant impact on firm performance.

Early researchers (Mace, 1971; Norburn & Grinyer, 1974; Rosenstein, 1987; Vance, 1983; Monks & Minnow, 1991) argued that boards made little contribution to strategy and the role of strategy making is performed mainly by the chief executive. The management led by the chief executive played a dominant role, often leading to power

imbalance between management and the board. The boards were therefore called 'Creatures of the CEO' (Mace, 1971) who are available for rubber stamping function (Herman, 1981). Lorsch and MacIver (1989) study also recognised the dominant role of management compared to boards, and suggested an advisory role to the boards in providing counsel on the evaluation of options, rather than initiating strategy. Boards' function was mainly viewed in terms of overseeing management, reviewing performance, and ensuring that the various activities of a firm are socially responsible and in compliance with the law. Commenting on selection of board members, Monks and Minnow (1991) suggest that directors are nominated on the basis of the management's comfort in working with them. These studies, while recognising the importance of boards, assumed relatively limited role for boards in strategy making.

Researchers such as Boulton (1978) and Andrews (1980) have recognised a more active role of boards in strategy. While Bolton argued that the strategic role of boards was evolving, Andrews (1980) recommended that directors should work with management in devising strategic plans based on their experience. Rindova (1999) supported this view by arguing that directors possess valuable problem solving expertise that can be used along with the management for strategic decisions. These studies, while recognising the role of boards in strategy, envisaged a relatively smaller role compared to that of management. In fact, Andrews (1981) argued that it is not the board's role to formulate strategy, but rather to review and monitor the process that produces it.

Others scholars (e.g., Tricker, 1984; Garrett, 1993; Coulson-Thomas; 1993) have suggested a wider role for boards in the strategy formulation. Tricker (1984) described the boards function in terms of establishing strategic direction, overseeing firm's strategy, assessing and monitoring performance, and also, becoming involved in action to ensure implementation. According to these scholars, excellence by boards requires more than

minimal legal compliance and boards should assume active guardianship of the shareholder's interest whilst also providing independent oversight of top management. Garrett (1993) argued that a director should be concerned with developing and communicating the corporate vision, mission, strategy and structure to ensure a firm's survival and sustained success. A similar view was taken by Lorsch (1997), who emphasised that good board performance is achieved by providing effective monitoring, advice and counsel to management, which are also essential for superior firm performance.

In addition to taking active part in strategy formulation, boards were also expected to examine business alternatives. Coulson-Thomas (1993) suggested that boards should play an active role in looking for business opportunities, and determining the firm's purpose. Donaldson (1995) suggests that while management is expected to turn strategic vision into operational reality, board must evaluate strategy based on how firm's return compare with those of other investments. However, Conger, Finegold, and Lawler (1998) believed that while boards are crucial, they are required only in emergency. They observed, "Boards are like fire departments: they aren't needed everyday, but they have to perform effectively when they are called upon" (p.148).

During 1990s, interest in boards was renewed mainly due to corporate excesses (McNulty & Pettigrew, 1999) and due to accountability pressures from different stakeholders such as regulators, shareholders, investment funds, and other lenders (Ingley & van der Walt, 2001). Different codes of conduct and guidelines were developed to ensure compliance and accountability (e.g., Cadbury report, 1992; CalPERS, 1997; Hampel, 1998). A strong emphasis was placed by these codes on the strategic role that boards can play in improving the firm performance. Bart and Bonits (2003) called for boards' involvement in developing the mission, while Walker (1999) and Rhodes (1999)

argued for a deeper involvement of boards in establishing and reviewing firm's mission and for implementation of strategic initiatives to meet the firm objectives.

Other practitioners have focused on strategic thinking (Garrett, 1996) and strategic leadership (Davies, 1999). According to Garrett (1996), Strategic thinking is related to long-term organisational effectiveness and involves strategic analysis, strategy formulation and corporate direction. Davies (1999) describes strategic leadership of board as a balance of strategic skills and experience relative to the needs of the firm, with a shared strategic direction and commitment to pursue it, and strong processes to ensure strategic management. Van der Walt and Ingley (2001) suggest that the top responsibilities of a board include setting policy/vision, monitoring performance, financial matters, and supporting the firm to achieve superior performance. Kemp's study (2006) of Australian boards finds that directors have a clear role in strategy formulation, strategic decision-making and strategic control. These studies indicate the importance of deeper involvement of board in strategy formulation and implementation.

While it is clear that boards have a crucial responsibility towards strategy, every board does not participate equally in strategic decision making. Some boards are considered 'passive' while others are considered 'active', based on their involvement in strategic decision making process (Golden & Zajac, 2001). Hendry and Kiel (2004) observe, "... literature demonstrates a swing from passive school of the 1970s and 1980s to the active school prevalent over the last ten years" (p. 509). Proponents of the active school suggest several roles for the boards. Wheelen and Hunger (2004) summarised the basic tasks of boards as follows:

- *Monitor*: A board should keep itself abreast of developments, both inside and outside the corporation. In addition to using the information in its decision-making, it can also bring to management’s attention developments it might have overlooked.
- *Evaluate and influence*: A board can examine management’s proposals, decisions, and actions; agree or disagree with them; give advice and offer suggestions; and outline alternatives. More active boards do this in addition to monitoring management activities.
- *Initiate and determine*: A board can delineate a corporation’s mission and specify strategic options to its management. Only the most active boards take on this task in addition to previous two.

Wheelen and Hunger (2004) proposed the board of directors' involvement as a continuum in strategic management process from low to high. Figure 2.1 shows the possible degree of the board’s involvement from being a passive observant to active participant.

← DEGREE OF INVOLVEMENT IN STRATEGIC MANAGEMENT →					
Low (Passive)					High (Active)
Phantom	Rubber Stamp	Minimal Review	Nominal Participation	Active Participation	Catalyst
Never knows what to do, if anything; no degree of involvement	Permits officers to make all decisions. It votes as the officers recommend on action issues.	Formally reviews selected issues that officers bring to its attention.	Involved to a degree in the performance or review of selected key decisions, indicators, or programs of management.	Approves, questions, and makes final decisions on mission, strategy, policies and objectives. Performs fiscal and management audits.	Takes the leading role in establishing and modifying the mission, objectives, strategy, and policies. It has a very active strategy committee.

Figure 2.1: Board of Directors’ involvement in strategic management

Source: Wheelen and Hunger (2004, p. 28)

Literature on boards suggests that boards' involvement in strategy ranges from being very low (Mace, 1971) to high (Garrett, 1996; Davies, 1999). However, in the



recent years, there has been a clear shift towards a more active role of boards in strategy (Hendry & Kiel, 2004). Support for active role for boards in strategy comes from the principles of corporate governance proposed by OECD (1999). OECD (1999) guidelines state that, “The corporate governance framework should ensure the strategic guidance of the company” (p. 9). John Smale, the former Chairman of the board of General Motors, observes, “The board is responsible for the successful perpetuation of the corporation. That responsibility cannot be relegated to management” (Harvard Business Review, 2000, p. 188). Boards’ main role is to govern the firm; board members are solely responsible for the firm’s affairs, and this responsibility cannot be delegated (Vint et al., 1998). Therefore, the primary responsibility of the directors is owed to value creation in the firm, while due consideration is given for the interests of shareholders and other parties, including employees, customers, suppliers and the society.

In the last decade, the scope of board activities has gained newer dimensions. Boards are responsible not only for firm strategy but are also accountable in case the organization does not function in the best interest of various stakeholders. In a landmark case, Delaware Court of Chancery in US found that “a director’s obligation includes a duty to attempt in good faith to assure that a corporate information and reporting system exists, and that failure to do so may render a director liable for losses caused by non-compliance with applicable legal standards” (cited in Robinson & Pauze, 1997, p. 65). This emphasis on the need for information and reporting systems implies that boards need to anticipate and ensure that minor matters do not become major problems. Shortcomings in this area of adequate reporting systems and transparency were some of the causes for corporate scandals such as Enron, WorldCom, Parmalat and HIH. In the US, Sarbanes Oxley Act of 2002 was issued to improve transparency and accountability of top management including the boards (Moeller, 2004).

While the involvement of boards in strategy has demonstrably increased (e.g., McNulty & Pettigrew, 1999; Stiles, 2001), the distinction between strategy formulation, monitoring, and execution at an operational level has become increasingly blurred (Ingley & van der Walt, 2001). In this process, boards also run the risk of taking over managerial responsibilities (Helmer, 1996). Further, there is little conclusive evidence of systematic relationship between board's strategic role and firm performance (Dalton, et al., 1998; Rhoades, Rechner & Sundaramurthy, 2000). Of late, contingency frameworks based on multiple theoretical perspectives were proposed to gain insights into the effect of board's strategic role on firm performance (Hillman & Dalziel, 2003; Hendry & Kiel, 2004). Further understanding of relationship between various board characteristics and the firm performance will enable appropriate decisions both in board formulation and allocation of resources. The current study is an attempt in this direction as it examines the relationship between board characteristics and firm performance.

### **2.3 Theoretical Perspectives**

The role and impact of boards has been studied by scholars of different disciplines such as law, economics, finance, sociology, strategic management and organisation theory (Kiel & Nicholson, 2003). The extant literature has primarily focussed on the characteristics of the boards in affecting firm performance (e.g., Fama & Jensen, 1983; Davis, Schoorman & Donaldson, 1997; Muth & Donaldson, 1998; Daily, Dalton, & Canella, 2003). Meanwhile, some scholars have also paid attention to other issues such as ownership (e.g., Kapopoulos & Lazeretou, 2007), CEO turnover and compensation (Lausten, 2002) in affecting firm performance. This section reviews four major theoretical perspectives of boards and governance mechanisms that are considered

relevant for this study viz., agency theory, stewardship theory, resource dependence theory and stakeholder theory.

### **2.3.1 Agency theory**

This view is based on the idea that in a modern corporation, there is separation of ownership (principal) and management (agent), and this leads to costs associated with resolving conflict between the owners and the agents (Berle & Means, 1932; Jensen & Meckling, 1976; Eisenhardt, 1989). The fundamental premise of agency theory is that the managers act out of self-interest and are self centred, thereby, giving less attention to shareholder interests. For example, the managers may be more interested in consuming perquisites like luxurious offices, company cars and other benefits, since the cost is borne by the owners. The managers who possess superior knowledge and expertise about the firm are in a position to pursue self-interests rather than shareholders (owners) interests (Fama, 1980; Fama & Jensen, 1983). This pursuit of self-interests increases the costs to the firm, which may include the costs of structuring the contracts, costs of monitoring and controlling the behaviour of the agents, and loss incurred due to sub-optimal decisions being taken by the agents. Shareholder interests can clearly be compromised if managers maximise their self-interest at the expense of organisational profitability, i.e., the managers expropriating shareholders interests. In essence, the managers cannot be trusted and therefore there is a need for strict monitoring of management by the board, in order to protect shareholder's interest. Further, in a large corporation with widely dispersed ownership, small shareholders do not have a sufficient payoff to expend resources for monitoring the behaviour of managers or agents. Eisenhardt (1989, p. 58) explains that agency problem arrives when "(a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually

doing”. Consequently, the monitoring of management activities is seen as a fundamental duty of a board, so that agency problems can be minimised, and superior organisational performance can be achieved.

Agency theory as posited by Jensen and Meckling (1976) assumes that agency problems can be resolved with appropriately designed contracts by specifying the rights belonging to agents and principals. Fama and Jensen (1983, p. 302) refer to such contracts as “internal rules of the game which specify the rights of each agent in the organisation, performance criteria on which agents are evaluated and the payoff functions they face.” However, unforeseen events or circumstances require allocation of residual rights, most of which end up with the agents (managers), giving them discretion to allocate funds as they choose (Shleifer & Vishny, 1997). The inability or difficulty in writing perfect contracts, therefore, leads to increased managerial discretion which encapsulates the same agency problem. Further, when principals monitor agents to ensure that agents act in the best interests of the principals, they incur monitoring costs, which further reduce the value of the firm.

Given the problems in mitigating agency problems through the use of contracts, scholars have suggested various governance mechanisms to address the agency problems. Agency theory thus provides a basis for firm governance through the use of internal and external mechanisms (Weir et al., 2002; Roberts et al., 2005). The governance mechanisms are designed to “protect shareholder interests, minimise agency costs and ensure agent-principal interest alignment” (Davis et al., 1997, p. 23).

Two important governance mechanisms used for this purpose are board of directors and compensation schemes to align the interests of both the agent and the principal. Fama (1980) considers the board a low-cost mechanism of management compared to other alternatives such as, for example, takeovers. The literature on board,

as a governance team, is mainly focused on issues such as board size, inside versus outside directors (also known as executive versus non-executive directors), separation of CEO and Chair positions, etc (Dalton et al., 1998; Coles & Hesterly, 2000; Daily et al., 2003) with an aim to improve the effectiveness of oversight. Executive compensation concentrates on the degree to which managers are compensated in ways that align their interests with those of shareholders (Davis et al., 1997; Tosi, Brownlee, Silva & Katz, 2003). Such incentivised compensation schemes are particularly desirable when the agents have a significant informational advantage and monitoring is difficult. Many scholars have relied upon agency theory to examine the role of boards and other related governance aspects in affecting firm performance (Cadbury, 1992; Vienot, 1995; Hampel, 1998; OECD, 1999; ICGN, 1999; King, 2002).

### **2.3.2 Stewardship theory**

While Agency theory assumes that principals and agents have divergent interests and that agents are essentially self-serving and self-centred, Stewardship theory takes a diametrically opposite perspective. It suggests that the agents (directors and managers) are essentially trustworthy and good stewards of the resources entrusted to them, which makes monitoring redundant (Donaldson 1990; Donaldson & Davis, 1991; Donaldson & Davis, 1994; Davis et al., 1997). Donaldson and Davis (1991, p. 51) observe, “organisational role-holders are conceived as being motivated by a need to achieve, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and bosses”.

The stewardship perspective views directors and managers as stewards of firm. As stewards, directors are likely to maximise the shareholders’ wealth. Davis et al.

(1997) posit how stewards derive a greater utility from satisfying organisational goals than through self-serving behaviour. Davis et al. (1997) argue that the attainment of organisational success also satisfies the personal needs of the stewards. Stewardship theory suggests that managers should be given autonomy based on trust, which minimises the cost of monitoring and controlling behaviour of the managers and directors. When managers have served a firm for considerable period, there is a “merging of individual ego and the corporation” (Donaldson & Davis, 1991, p. 51).

Stewardship theory considers that manager’s decisions are also influenced by non-financial motives, such as need for achievement and recognition, the intrinsic satisfaction of successful performance, plus respect for authority and the work ethic. These concepts have been well documented throughout the organisational literature in the work of scholars such as Argyris (1964), Herzberg (1966), McClelland (1961), and Muth and Donaldson (1998). Davis et al. (1997) suggest that managers identify with the firm and it leads to personalisation of success or failure of the firm. Daily et al. (2003) argue that managers and directors are also interested to protect their reputation as expert decision makers. As a result, managers operate the firm in a manner that maximises financial performance, including shareholder returns, as firm performance directly impacts perception about managers’ individual performance. Fama (1980) suggests that managers who are effective as stewards of the firm are also effective in managing their own careers. Supporting this view, Shleifer and Vishny (1997) suggested that managers who bring good financial returns to investors, establish a good reputation that allows them to re-enter the financial markets for the future needs of the firm.

From the stewardship theory perspective, superior performance of the firm was linked to having a majority of the inside (executive) directors on the board since these inside directors (managers) better understand the business, and are better placed to govern

than outside directors, and can therefore make superior decisions (Donaldson, 1990; Donaldson & Davis, 1991). Stewardship theory argues that the effective control held by professional managers empowers them to maximise firm performance and corporate profits. Consequently, insider-dominated boards are favoured for their depth of knowledge, access to current operating information, technical expertise and commitment to the firm. Similarly, CEO duality (i.e., same person holding the position of Chair and the chief executive) is viewed favourably as it leads to better firm performance due to clear and unified leadership (Donaldson & Davis, 1991; Davis, et al., 1997).

Several studies support the view that insider directors (managers), who possess a superior amount and quality of information, make superior decisions (Baysinger & Hoskisson, 1990; Baysinger, Kosnick & Turk, 1991 and Boyd, 1994). Muth and Donaldson (1998) compared the predictions of agency theory with that of stewardship theory and found support for stewardship theory being a good model of reality. Bhagat and Black (1999) have also found that firms with boards consisting of a greater number of outside directors (representing agency theory perspective), perform worse than firms with boards with less number of outside directors. As such, some support exists for the stewardship perspective both conceptually (e.g., Davis et al., 1997) and also empirically (Bhagat & Black, 1999).

### **2.3.3 Resource dependence theory**

Resource dependence theory provides a theoretical foundation for the role of board of directors as a resource to the firm (Johnson et al., 1996; Hillman et al., 2000). Penrose (1959) stressed the importance of unique bundles of resources a firm controls that are crucial for its growth. Such resources include all assets, capabilities, organisational processes, firm attributes, information, and knowledge controlled by a firm, in order to

improve efficiency and effectiveness (Barney, 1991; Daft, 2006). From this point of view, firm governance structure and the board composition is viewed as a resource that can add value to the firm.

A key argument of the resource dependence theory is that organisations attempt to exert control over their environment by co-opting the resources needed to survive (Pfeffer & Salancik, 1978). Accordingly, boards are considered as a link between the firm and the essential resources that a firm needs from the external environment for superior performance. Appointment of outsiders on the board helps in gaining access to resources critical to firm success (Johnson et al., 1996, p. 410). In the resource dependence role, outside directors “bring resources to the firm, such as information, skills, access to key constituents (e.g., suppliers, buyers, public policy decision makers, social groups) and legitimacy” (Hillman et al., 2000, p. 238).

Board directors also function as boundary spanners, and there by enhance the prospects of a firm’s business. For example, the outside links and networks that board members exercise may positively benefit the development of business and long-term prospects. Pfeffer and Salancik (1978, p. 163) observe, “when an organisation appoints an individual to a board, it expects the individual will come to support the organisation, will concern himself [or herself] with its problems, will favourably present it to others, and will try to aid it”. Appointment of outside directors and board interlocks can be used to manage environment contingency. In an earlier study, Pfeffer (1972) showed that the board size and background of outside directors are important to managing an organisation’s needs for capital and the regulatory environment.

Pearce and Zahra (1992) underscore the importance of board composition as it facilitates resource exchange between a firm and its external environment, which is essential for organisational survival and effective financial performance. Pearce and



Zahra (1992) find that in the presence of higher environmental uncertainty, board size and presence of outsider directors is associated with more efficient and effective strategy development and execution. Carpenter and Westphal (2001) show how the social context of external ties helps businesses. Thus, boards serve as a co-optative mechanism whereby a firm links with its external environment to secure resources and, to protect itself against environmental uncertainty.

Resource dependency role of board of directors also examines how they help the firm in gaining access to financial resources (Thompson & McEwen, 1958; Pfeffer, 1972; Mizuchi & Stearns, 1988). Thompson and McEwen (1958) argued that a firm with a higher level of bank debt might appoint an officer of the bank to ensure easy access to the bank's funds. Similarly, Mizuchi and Stearns (1988) find that firms with solvency problems are likely to appoint representatives of the financial institutions to their boards. Such appointments show that the value placed on capital as a resource plays a role in the behaviour of individual firms. Stearns and Mizuchi (1993) also find an association between firms borrowing strategy and type of financial representation on the board as such relationships provide both the parties with an opportunity to co-opt each other on a continuous.

Scholars have also used resource dependence theory to explain the composition of boards, specially in terms of outsider representation. Kaplan and Minton (1994) find poor financial or stock market performance of a firm often leads to appointment of financial directors to the board. Hermalin and Weishbach (1988) also find that inside directors are replaced with experienced outsiders, when the firm performance is poor. Further, Pearce and Zahra (1992) find that outsiders are appointed on the board in order to bring a fresh perspective when the firm is not doing well. Muth and Donaldson (1998) argue for the importance of network connections, which, according to resource dependence theory,

enhance firm performance. Thus, the resources dependence theory views the board as a resource that can not only supplant its need for other resources, but also influence the environment in its favour, and thereby improve firm performance.

#### **2.3.4 Stakeholder theory**

Stakeholder theory is an extension of the agency view, which expects board of directors to take care of the interests of shareholders. However, this narrow focus on shareholders has undergone a change and boards are now expected to take into account the interests of many different stakeholder groups, including interest groups linked to social, environmental and ethical considerations (Freeman, 1984; Donaldson & Preston, 1995; Freeman et al., 2004). This shift in the role of the boards has led to the development of stakeholder theory. Stakeholder theory views that “companies and society are interdependent and therefore the corporation serves a broader social purpose than its responsibilities to shareholders” (Kiel & Nicholson, 2003a, p. 31). Likewise, Freeman (1984), one of the original proponents of stakeholder theory, defines stakeholder as “any group or individual who can affect or is affected by the achievement of the organisation’s objectives” (p. 46).

There is considerable debate among scholars on whether to take a broad or narrow view of a firm’s stakeholder. Freeman’s definition (1984, p. 46) cited above proposes a broad view of stakeholders covering a large number of entities, and includes almost all types of stakeholders. In contrast, Clarkson (1994) offers a narrow view, suggesting “voluntary stakeholders bear some form of risk as a result of having invested some form of capital, human or financial, or something of value, in a firm. Involuntary stakeholders are placed at risk as a result of a firm’s activities. But without the element of risk there is no stake” (p. 5). The use of risk enables stakeholders a legitimate claim on a firm’s

decision making, regardless of their power to influence the firm. Donaldson and Preston (1995, p. 85) identify stakeholders as “persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity.” For Example, Wheeler and Sillanpaa (1997) identified stakeholder as varied as investors, managers, employees, customers, business partners, local communities, civil society, the natural environment, future generations, and non-human species, many of whom are unable to speak for themselves. Mitchell, Agle and Wood (1997) argue that stakeholders can be identified by possession of one, two or all three of the attributes of: (1) power to influence the firm, (2) the legitimacy of relationship with the firm, and (3) the urgency of their claim on the firm. This typology allows managers to pay attention and respond to various stakeholder types.

Stakeholder theory recognises that many groups have connections with the firm and are affected by firm’s decision making. Freeman et al. (2004) suggest that the idea of value creation and trade is intimately connected to the idea of creating value for shareholders; they observe, “business is about putting together a deal so that suppliers, customers, employees, communities, managers, and shareholders all win continuously over time.” Donaldson and Preston (1995) refer to the myriad participants who seek multiple and sometimes diverging goals. Manager’s view of the stakeholders’ position in the firm influences managerial behaviour. However, Freeman et al. (2004) suggest that managers should try to create as much value for stakeholders as possible by resolving existing conflicts among them so that the stakeholders do not exit the deal.

Carver and Oliver (2002) examine stakeholder view from non-financial outcomes. For example, while shareholders generally define value in financial terms, others stakeholders may seek benefits “such as the satisfaction of pioneering a particular breakthrough, supporting a particular kind of corporate behaviour, or, where the owner is also the operator, working in a particular way” (p. 60). It means stakeholders have ‘non-

equity stakes' which requires management to develop and maintain all stakeholder relationships, and not of just shareholders. This suggests the need for reassessing performance evaluation based on traditional measures of shareholder wealth and profits by including measures relating to different stakeholder groups who have non-equity stakes.

Nonetheless many firms do strive to maximise shareholder value while, at the same time, trying to take into account the interest of the other stakeholders. Sundaram and Inkpen (2004a) argue that objective of shareholder value maximisation matters because it is the only objective that leads to decisions that enhance outcomes for all stakeholders. They argue that identifying a myriad of stakeholders and their core values is an unrealistic task for managers (Sundaram & Inkpen, 2004b). Proponents of stakeholder perspective also argue that shareholder value maximisation will lead to expropriation of value from non-shareholders to shareholders. However, Freeman et al. (2004) focus on two core questions: 'what is the purpose of the firm?' and 'what responsibility does management have to stakeholders?'. They posit that both these questions are interrelated and managers must develop relationships, inspire their stakeholders, and create communities where everyone strives to give their best to deliver the value the firm promises. Thus the stakeholder theory is considered to better equip managers to articulate and foster the shared purpose of their firm.

### **2.3.5 Integration of different theories**

Each of the theories reviewed give primacy to a particular view on how boards should deal with board decisions. Table 2.1 presents a summary of the four theories, I discussed above.

**Table 2.1: Summary of four theoretical perspectives and implications for boards**

<i>Theory</i>	<i>Role of Board</i>	<i>Implications for board</i>
Agency theory	Managerial control	Independent boards are a mechanism for shareholders to retain ownership control rights and monitor performance
Stewardship theory	Managerial empowerment	The board controlled by management is empowered and manages corporate assets responsibly
Resource dependency theory	Co-optation	Board with strong external links is a co-optation mechanism for firms to access external resources
Stakeholder theory	Uphold interests of all stakeholders	Maximising the shareholder returns is not sole objective; interests of all stakeholders should be equally honoured.

As summarized above, agency theory focuses on the conflicting interests between the principals and agents while stewardship theory views managers as stewards and proposes alignment of interest between the steward and organisational objectives. On the other hand, stakeholder theory explores the dilemma regarding the interests of different groups of stakeholders. Resource dependency theory underscores the importance of board as a resource and envisages a role beyond their traditional control responsibility considered from agency theory perspective.

Among various theories discussed, the agency theory perspective was the most popular and has received maximum attention from academics (Jensen & Meckling, 1976; Fama & Jensen, 1983) as well as practitioners. It provided the basis for governance standards, codes and principles developed by many institutions (CalPERS, 1999; OECD, 1999, 2004; ICGN, 1999, 2005). Boards are appointed by the shareholders to monitor and control managerial decision making to protect the shareholders' interest. In particular, this monitoring role was expected to be effectively performed through independent non-executive directors and that the positions of Chairman and CEO should be held by different persons (Cadbury, 1992; OECD, 1999; ICGN, 1999, Combined

Code, 2006). However, other alternative theories of stewardship theory, resource dependency theory and stakeholder theory have become prominent over the recent times.

Others scholars (e.g. Boyd, 1995; Hillman & Dalziel, 2003) have taken a different approach and have not limited themselves to a particular distinctive perspective. Boyd (1995) argues that the seemingly opposing perspectives of both agency and stewardship theories can be correct, but under different environmental conditions, by using a contingency approach. Hillman and Dalziel (2003) integrated the agency and resource dependency perspectives and argued that each board has board capital and it affects both board monitoring (agency perspective) and the provision of resources (resources dependency perspective) and that board incentives moderate these relationships. Hendry and Kiel (2004) explain that the choice of a particular theoretical perspective depends on ‘contextual factors’ such as board power, environmental uncertainty and information asymmetry. Though there are different perspectives regarding the firm, “many of these theoretical perspectives are intended as complements to, not substitutes for, agency theory” (Daily et al., 2003, p. 372).

Review of different perspectives clarifies that there is need to take an integrated approach rather than a single perspective to understand the effect of corporate governance on firm performance. While agency theory places primary emphasis on shareholders’ interests, stakeholder theory places emphasis on taking care of interests of all stakeholders, and not just the shareholders. In line with this, Jensen (2001) suggests enlightened value maximisation, “which utilises much of enlightened stakeholder theory but accepts maximisation of the long-run value of the firm as the criterion for making the requisite trade-offs among is stakeholders ... and therefore solves the problems that arise from multiple objectives that accompany traditional stakeholder theory” (p. 298). To gain a greater understanding of board process and dynamics, as discussed on this section, there

is need to integrate different theories rather than consider any single theory. Such an approach was supported by Stiles (2001) who calls for multiple theoretical perspectives and Roberts et al. (2005) who suggests theoretical pluralism.

The next section utilizes the above four theoretical perspectives to identify specific board characteristics and their influence on firm performance.

## **2.4 Board Characteristics and Firm Performance**

In this section, I present a review of literature on board characteristics and firm performance linkage. Appendix 1 presents an overview of literature linking board/top management with firm performance. Extant literature shows that many studies carried out until 1990s were mostly normative/prescriptive in nature (e.g., Fama, 1980; Fama and Jensen, 1983; Lorsch & MacIver, 1989). These studies were from agency perspective and talked about the benefits of independence of board, separating the positions of board chair and the CEO, and increasing representation by non-executives to make boards more effectively perform their role of monitoring the management.

Evidence form empirical studies undertaken in last two decades indicate support to various propositions board characteristics to firm performance. For example, firm performance is linked positively with the proportion of executive directors (Bhagat & Black, 1999; Keil & Nicholson, 2003), non-executive directors (Fox, 1998; Rhoades et al., 2000; Chiang, 2005; Fan, Lau & Young, 2007), CEO duality (Boyd, 1995; Kula, 2005), separation of chair and CEO positions (Rechner & Dalton, 1991; Fox, 1998; Coles & Hesterly, 2000; Daily et al., 2003). In general, while providing support to existing theories, studies also produce conflicting evidence. A meta-analysis of board composition, leadership structure and financial performance carried out by Dalton et al.

(1998) covering 54 studies of board composition and 31 studies of board leadership structure did not provide any systematic relationship between board structure and firm performance. However, subsequent studies (Gompers, et al., 2003; Kiel & Nicholson, 2003) showed a positive relationship between board composition and firm performance. Others scholarly studies suggest that within board structure, different internal governance mechanisms such as director ownership, CEO duality, non-executive directors are substitutable (Bathala & Rao, 1995; Booth, Cornett and Tehranian, 2002; Peasnell, Pope & Young, 2003). It is also posited that various governance mechanisms may operate differentially for different sizes of firms, indicating the tradeoffs to control agency conflicts.

While many of the studies mentioned here cover a broad range of issues in corporate governance such as voting rights, disclosures, regulations etc, the current study focuses on the top management team of the firm, from an upper echelons perspective. In the following section, I present the review of literature to identify various characteristics of the board namely director ownership, CEO duality, gender diversity, PhDs, board meetings and board size that should be examined for their impact on firm performance.

#### **2.4.1 Director Ownership**

Impact of director ownership is a disputed issue in the literature (Demsetz & Lehn, 1985; Shleifer & Vishny, 1997; Becht et al., 2005; Sheu & Yang, 2005). Berle and Means (1932) posited that ownership does influence firm performance and suggested separation of ownership and control. But Demsetz and Lehn (1985) refute Barle and Means's proposition by arguing that ownership is determined endogenously and firms seek equilibrium ownership level. On the other hand, Morck, Shleifer and Vishny (1988) state that adjusting ownership continuously is costly and as a consequence, firms have



lower than optimal ownership structure, leading to lower levels of performance. Core and Larcker (2002) attempt to reconcile the two views represented by Demsetz and Lehn (1985) and Morck et al., (1988). They argue that firms start with an optimal level of managerial ownership at the time of initial contracting. However, firms deviate and do not continuously adjust to reach optimal level to avoid re-contracting costs. In other words, firms compare the marginal benefit and marginal cost when deciding whether to adjust to re-attain the optimal level of ownership structure.

One of the basic features of a modern corporation is the separation of ownership and control, based on the proposition of Berle and Means (1932). This separation triggers a conflict between the interests of managers and shareholders. While owners (stockholders) are interested in maximising the value of the firm for maximising their returns, managers might be concerned with enhancing their personal wealth and prestige. Even after a contract between the principal and the agent, since the control of the capital is with the agents (managers), they end up with significant control rights (discretion) over the allocation of the investors' funds (Shleifer & Vishny, 1997). This leads to conflict of interest between the shareholders and the managers and forms the basis of agency problem, which aims to ensure that financial suppliers' capital (in this case, the shareholders) is not expropriated or wasted by the managers. This expropriation can exist in three different ways: the manipulation of transfer pricing, entering into projects that benefit managers instead of the firm, and management entrenchment or staying on the job beyond their competency.

One way to resolve the potential conflict between the shareholders and managers is by aligning the interests of both the shareholders and the managers (Davis et al., 1997). According to the Agency theory, alignment of interests between shareholders and managers can occur through directors' shareholding, which will then have a powerful

personal incentive to exercise effective oversight of the firm management. The idea is to re-unite the ownership and control through meaningful director stock ownership and hence better management monitoring (Elson, 1996). For example, Brickley, Lease & Smith (1988) argue that stock ownership by managers and board members gives them an incentive to ensure that the firm is run efficiently and to monitor managers carefully. Jensen and Murphy (1990) report a positive correlation between CEO stock options and firm performance.

The director ownership can take place in two forms: managerial ownership (Jensen & Meckling, 1976) and block holder ownership (Shivdasani, 1993). Managerial (inside) ownership is also influenced in two different ways: reputation and compensation. Inside owners avoid risk not only for agency reasons but for other related reasons such as reputation and career growth. For example, managers and directors have to protect their reputation, which may be necessary to raise capital in future (Shleifer & Vishny, 1997). Further, executives and directors are concerned about the firm performance not only because their pay is linked to it, but because their future career opportunities also get affected (Becht et al., 2005).

Fama (1980) explains the link between reputation and compensation by arguing that managers will be compensated relative to market's estimation of how well they are aligned to shareholder's interest, as manifested by their past performance. The idea that directors are concerned with reputation and therefore work in the interests of the firm is explained by the stewardship theory. This concern for reputation can also be seen from the resource dependency perspective because reputation of directors and managers is reckoned as a firm resource as it helps the firms in raising capital and for co-opting the environment.

Other scholars such as Shleifer and Vishny (1997; Becht et al., 2005) state that a large shareholding is the most direct way to align cash flow and control rights of outside directors. Larger shareholders have much more incentives to collect information and monitor agents, as well as possess information and monitor agents and process enough voting rights to pressure management. This gives block shareholders both ownership and control, a situation in direct contrast to the seminal proposition of Berle and Means (1932) regarding the conflict of interest between owners and managers.

However, a major drawback of the large shareholder is that they have a tendency against diversification and, therefore, bear a large proportion of the risk. Becht et al. (2005) identify the existence of a trade-off between optimal risk diversification, obtained under a dispersed ownership structure, and optimal monitoring incentives, which requires concentrated ownership. Shleifer and Vishny (1997) also identify costs to other stakeholders of having large investors: the straight forward expropriation of minority investors, managers, as well as employees and inefficient expropriation through pursuit of the personal objectives of the large investor.

In this study, I focus on the director shareholding, which is a part of internal monitoring mechanism. Chung and Pruitt (1996) find that managerial equity ownership is positively affects firm performance. Palia and Lichtenberg (1999) also observe a positive relationship between managerial ownership and total factor productivity. Becht et al. (2005) propose that the structure of executive compensation contracts can have a large influence in aligning the interest of shareholders and management; hence a proper design of this incentive can decrease the agency costs. For example, directors' remuneration can be determined by labour market, long term incentive plans consisting of bonuses and stock options upon achieving long-term performance goals. However,

reservations were expressed about the effectiveness of the managerial compensation systems.

The notion of alignment of interests of owners and managers is based on the assumption that earnings and stock prices cannot be manipulated. However, Morck et al. (1988) and Shleifer and Vishny (1997) argue that there is room for management manipulation of pay-performance contract to gain favourable outcome for themselves. They also observe that management share of ownership is too small to keep managers interested in profit maximisation. De Angelo and De Angelo (1985) mentioned that high level of managerial ownership will entrench management and create agency problems. Other studies provide evidence that managerial ownership is not an explanatory variable, instead is endogenously determined by firm performance (Demsetz and Lehn, 1985; Loderer & Martin, 1997; Cho, 1998). Two recent studies (Dalton, Certo & Roengpitya, 2003; Sheu & Yang, 2005) find no relationship between insider ownership and firm performance. Becht et al. (2005) argued that stock options are simple and direct way for CEOs to enrich themselves and expropriate shareholders. That is why Farrar (2001) suggests that the level of compensation should be handled by independent persons or independent committees.

Overall, the literature indicates conflicting views about the impact of director ownership on firm performance. It is well known that most firms compensate their directors through fees, stocks, options or combination of them (Elson, 1996; Shleifer & Vishny, 1997; Bebchuk, Fried & Walker, 2002). Hence the director ownership is a key feature of many firms and further understanding of its effect on firm performance will be beneficial for practitioners and may provide useful insights to researchers.

## 2.4.2 CEO Duality

The position of board chairman wields power, influence and responsibility (Lechem, 2002). The chairman ensures that different views are heard and arrays of ideas are brought to table for discussion to enable a harmonious and effective decision making. Leighton and Thain (1993) stated that the effectiveness of the board is in fact largely decided, and dependent on, the efficacy of this position. Cadbury report (1992) states:

[the Chairman is] primarily responsible for the working of the board, for its balance of membership subject to board and shareholders' approval, for ensuring that all relevant issues are on the agenda, and for ensuring that all directors, executive and non-executive alike, are enabled and encouraged to play their full part in its activities (p. 21).

An important board control structure mechanism is CEO duality. It refers to a situation where the firm's CEO also serves as chairman of the board of directors. There are two competing views about CEO duality based on the perception of whether a firm is best served by strong leadership (stewardship theory), or by monitoring effectively (agency theory). The intent of this dichotomy is to serve as a proxy for how much independence the Chairman possesses. A person who holds both the positions of CEO and the chair is expected to provide a centralised focus on achieving the goals, and to provide strong leadership to the firm.

However, if the CEO holds the position of Chair, s/he will widen the power base and weaken the board's role of monitoring and evaluating performance of the top management (Coles & Hesterly, 2000). Finkelstein and D'Aveni (1994) summarise the essence of this dichotomous view, "According to organisation theory, such CEO duality establishes strong, unambiguous leadership. But according to agency theory, duality promotes CEO entrenchment by reducing board monitoring effectiveness" (p. 1079).

Many reports (e.g., Cadbury, 1992; Higgs, 2003) have underscored the need to separate the role of Chairman from that of chief executive.

Boards, in which the positions of the Chair and the CEO are separated, are considered to be independent as such an arrangement dilutes the power of the CEO and increases the board's ability to effectively perform its oversight role (Fama & Jensen, 1983; Boyd, 1995). However, mere separation may not be clear indication of the independence of the board. Hermalin and Weisbach (1998) suggest that board independence depends on the CEO's bargaining position, which is effectively derived from his/her perceived ability. Further, in firms with separation of the positions of Chair and CEO, it was found that the position of Chair of the board is given as part of promotion and succession (Brickley, Coles & Jarrell, 1997). This is particularly important in information sensitive firms, where CEOs gather valuable knowledge, which can be used by them if they are promoted to the position of the Chair of the board. Coles and Hesterly (2000) suggest that the chairman who may have previously served as manager of the same firm will have close ties with the management.

Further, Booth et al. (2002) posit that CEO/Chair duality and director ownership are actually substitutes for each other, along with outside directors and regulations, for monitoring the divergence between managers and stockholders. Peasnell et al. (2003) also find substitution between managerial ownership and board composition. These results confirm that there are indeed tradeoffs between monitoring mechanisms used to control agency conflicts.

Empirical studies reveal a conflicting set of results (e.g., Rechner and Dalton, 1991; Boyd, 1995; Coles & Hesterly, 2000). While Rechner and Dalton (1991) found a positive relationship between an absence of CEO duality and firm performance, Boyd (1995) found that CEO duality actually helps firm performance. Others have found no

significant difference between the firms with CEO duality and those without (Daily & Dalton, 1997; and Dalton et al., 1998). In fact, Daily and Dalton (1997) suggested that separation of CEO and board chair positions will result in misdirected effort.

While the debate still continues on the costs and benefits of CEO duality (e.g., Chaganti, Mahajan & Sharma, 1985; Brickley et al., 1997; Coles & Hesterly, 2000; Heracleous, 2001), scholars such as Fama and Jensen (1983) and Rechner and Dalton (1991) support separation of the CEO and Chair positions in order to increase the independence of the board. Cadbury (1992) believes the role of chairman should in principle be separate from that of the chief executive; if the two roles are combined in one person, it represents a considerable concentration of power within the decision making process. This view is supported by many other reports (e.g., Greenbury, 1995; Higgs, 2003). Further empirical validation of the normative view of separation of Chair and CEO positions would provide additional clarity in the matter.

### **2.4.3 Gender diversity**

Gender diversity is part of the broader concept of board diversity (Milliken and Martins, 1996). The concept of board diversity suggests that boards should reflect the structure of the society and appropriately represent the gender, ethnicity and professional backgrounds. Boards are concerned with having right composition to provide diverse perspectives (Milliken & Martins, 1996; Biggins, 1999). Board diversity is supported on the ground of moral obligation to shareholders (Carver, 2002), stakeholders (Keasey, Thompson & Wright, 1997), corporate philanthropy (Coffey & Wong, 1998) and for commercial reasons (Mattis, 2000; Daily & Dalton, 2003). However, diversity should not only ensure equitable representation but also provide for an expression of broadening the principle of merit (Burton, 1991). Robinson and Dechant (1997) postulate that

diversity promotes a better understanding of market place, increases creativity, produces more effective problem-solving and leadership and promotes effective global relationships.

Gender diversity in the boards is also supported by different theoretical perspectives. For example, agency theory is mainly concerned about independence of directors and a balance between executive and non-executive directors on boards. Representation from diverse groups will provide a balanced board so that no individual or small group of individuals can dominate the decision-making of the board (Hampel, 1998). Further, diversity also provides representation for different stakeholders of the firm for equity and fairness (Keasey et al., 1997). From resource dependency perspective, the board is a strategic resource, which provides a linkage to various external resources (Ingley & van der Walt, 2001). This is facilitated by board diversity. Many scholars now believe that an increase in board diversity leads to better boards and governance on the ground that diversity allows boards to tap on broader talent pools for the role of directors (Pearce & Zahra, 1991; Burke, 1997; Daily, Certo & Dalton, 1999; Singh & Vinicombe, 2004).

Of late, gender diversity has drawn the attention of various scholars (e.g., van der Walt & Ingley, 2003; Singh & Vinicombe, 2004; Huse & Solberg, 2006). Issues examined include: the reasons for fewer women on corporate boards (Burke, 1997; Singh & Vinicombe, 2004); the predictors of both organisational and outside forces for women on boards (Burke, 2000); and women directors and managers' experiences and perceptions of their role (Burke & Mattis, 2000; Huse & Solberg, 2006; Jamali, Safieddine & Daouk, 2007).

In corporate world, women representation on boards is very limited. According to Catalyst census, women directorship is only 12.4 per cent in the US and 6.4 in the



UK; the percentage of executive directors is 2 percent in both countries (Singh & Vinnicombe, 2004). In Canadian boards, women representation was less than 5 percent (Burke, 1997). Daily, Certo and Dalton (2000) have also found similar results in US, with meagre, but a growing level of representation for women in the boardroom. Further, 86 per cent of CEOs consider female representation on boards as very important for their organizations (Mattis, 2000).

Previous research suggests that most of the women directors are usually outsiders and from non-corporate field (Hillman, Cannella & Harris, 2002). They are also likely to possess staff/support managerial skills such as legal, human resources, communications, public relations rather than line functions of operations, marketing, compared to men (Zelechowski & Bilimoria, 2004). Due to glass ceiling, many women do not have opportunity for extensive experience in the corporate-world, and hence they are likely to be non-executive directors. However, as boards' size increased steadily through 1980s and 1990s, more women got opportunities to be represented on the boards. Further, scholars have argued that it makes good business sense to have women on board as "60 per cent of all purchases [in the US] are made by women" (Daily et al., 1999, p. 94).

In a recent study, Smith, Smith and Verner (2006) found that women on board of directors have significant positive effect on firm performance. With most of them having non-corporate background, women are far more likely to hold valuable, unique, and rare information because they have been excluded from the traditional development paths of corporate directorships. Letendre (2004) brings up the idea of 'value in diversity' and suggests that female board members will bring diverse viewpoints to the boardroom and will provoke lively boardroom discussions. Bilimoria and Wheeler (2000) suggest that, on an average female board member is younger than her male

counter part, and so the board benefits from infusion of new ideas and approaches to deliberations. Women may have different views, values and ways to express and communicate their opinions. As a result, women are more likely to question the conventional wisdom and to speak up when concerned about an issue or a particular managerial decision through more questioning and open discussion (Fondas & Sassalos, 2000; Huse & Solberg, 2006). Even if gender diversity causes disagreement, Latendre (2004) suggests such disagreements are valuable to the board as it leads to better board dynamics and decision making.

The effect of women directors was empirically examined by Carter, Simkins and Simpson (2003), Fields and Keys (2003), Bonn (2004) and Farrell and Harsch (2005). Carter et al., (2003) found a positive relationship between gender diversity and firm performance. Bonn (2004) found a positive relationship between the ratio of women directors and firm performance. Some studies have examined the effect of women on board committees and found a positive effect on firm performance (Bilimoria & Piderit, 1994). However, recent studies by Ding and Charoenwong (2004) and Farrell and Hersch (2005) did not find significant relationship between women directors and shareholder returns. Instead, Farrel and Hersch (2005) found that gender diversity occurs more in response to internal and external calls for diversity. Recognising the value of women directors, Norway has brought a legislation in 2005 requiring every public listed company to have 40 per cent of board members to be women by January 1, 2008 or face the risk of closure (Guardian Unlimited, 2006). In the light of such regulations and increasing importance of women in the corporate world, it is important to further explore the impact of boards' gender diversity on firm performance.

#### **2.4.4 Educational Qualification**

As a group, a board of directors combines a mix of competencies and capabilities that collectively represent a pool of social capital, and adds value in executing the board's governance function (Carpenter & Westphal, 2001). Qualifications of individual board members are important for decision making. For example, the monitoring role can be effectively implemented if the board members are qualified and experienced. From the resource dependency perspective, qualified and skilful board members can be considered as a strategic resource to provide a strategic linkage to different external resources (Ingle & van der Walt, 2001). Board members with higher qualifications would ensure an effective board, which requires, "high levels of intellectual ability, experience, soundness of judgement and integrity" (Hilmer, 1998, p. 62).

Several studies have found a positive relationship between competencies and firm performance (Boyatzis, 1982; Dunphy, Turner & Crawford, 1997; Hunt, 2000; Ljungquist, 2007). Boards members with higher qualifications benefit the firms through a mix of competencies and capabilities (Carpenter & Westphal, 2001; Carver, 2002), which helps in creating a diverse perspectives to decision making (Milliken & Martins, 1996; Biggins, 1999) Presence of more qualified members would extend knowledge base, stimulate board members to consider other alternatives and enhance a more thoughtful processing of problems (Cox & Blake, 1991). Members with higher educational qualifications in general and research and analysis intensive qualification like PhDs in particular will provide a rich source of innovative ideas to develop policy initiatives with analytical depth and rigour that will provide for unique perspectives on strategic issues (Westphal and Milton, 2000).

Empirical research linking educational qualifications of directors to firm performance is scanty (Bilimoria & Piderit, 1994a; Yermack, 2006). Bilimoria and

Piderit (1994a) examined the qualifications of corporate board members in terms of general characteristics such as tenure, age, director type rather than specific educational qualifications. Haniffa and Cooke (2002) found positive relationship between general business and accounting education of board directors and disclosure of information that demonstrates accountability and credibility of the top management team. Ferris, Jagannathan and Pritchard (2003) examined the professional background of directors in the case of multiple directorships and found venture capitalists stand out among bankers, consultants, venture capitalists and former executives. In a study on women directors, Smith et al. (2006) found that the positive effect of women on firm performance depends on their qualifications. These results can be easily generalised for all members.

Educational qualifications are included in the index for evaluating corporations' adherence to corporate governance (Institutional Shareholder Service, 2006). Yermack's study (2006) found that share price reactions are sensitive, among others, to director's professional qualifications, particularly in the area of accounting and finance. It is clear that directors' qualifications and their specialisations are related to firm performance. However, the effect of level of educational qualifications of board members on firm performance has not received sufficient attention in literature. This study attempts to examine the impact of highest level of educational qualification, namely PhD on firm performance.

#### **2.4.5 Board Meetings**

Board meetings are used as a measure of intensity of board activity and a value-relevant board attribute (Vafeas, 1999). The view that board meetings are a resource is reinforced by the criticism of directors who take up multiple directorships and thereby limiting their ability to attend meetings regularly to monitor management (e.g., Byrne,

1996; NACD, 1996). A clear implication of these studies is that directors in boards that meet frequently are more likely to perform their duties in accordance with shareholders' interests.

While board meetings bring benefits such as more time for directors to discuss, set strategy, and monitor management, there are also costs associated with board meetings: managerial time, travel expense, and directors' fees (Vafeas, 1999). So, there would be an optimum number of meetings for the board to outweigh the costs associated. Lipton and Lorsch (1992) suggest that a major impediment to board effectiveness is a lack of time to complete board duties. So boards that meet frequently are more likely to perform their duties diligently and in accordance with shareholders interests (Lipton & Lorsch, 1992; Byrne, 1996). Conger et al. (1998) suggest that board meeting time is an important resource in improving the effectiveness of the board. Board process has, therefore, tremendous impact on board task performance and effective meetings are essential for the successful performance of the board tasks (Zahra & Pearce, 1989). Specifically, Vafeas (1999) found a significant association of board meetings with firm performance.

Board meetings were also found to be beneficial in other aspects of board performance. For example, Carcello, Hermanson, Neal, Riley, (2002) found that quality of audit work is associated with number of board meetings. Implicit in this study is that a higher quality audit work protects the shareholders' interest and improves firm performance. Beasley, Carcello, Hermanson and Lapidés (2000) examined the relationship between frequency of audit committee meetings and likelihood of financial statement fraud and found that companies involved in fraud have fewer audit committee meetings.

On the other hand, Lipton and Lorsch (1992) and Jensen (1993) pointed out that board meetings are not necessarily useful because, given the limited time available, they

cannot be used for meaningful exchange of ideas among directors. Jensen (1993) suggested that board should be relatively inactive, and that boards are required to become active in the presence of problems.

It is clear that from the agency perspective, a board that demonstrates greater diligence in discharging its responsibilities will enhance the level of oversight by the board. Letendre (2004) suggest that in addition to having sufficient time to discuss issues at hand in depth, boards should regularly review the performance. It will make management monitoring effective, resulting in improved firm performance. Carcello et al. (2002) concede that board diligence includes many more factors than mere board meetings; e.g., preparation before meetings, attentiveness, participation during meetings, and post-meeting follow-up. However, only one publicly documented information is available to indicate board diligence and it is the number of board meetings. Lawler, Finegold, Benson and Conger (2002) conclude that board practices are positively related to firm performance as a result of effective governance. So it can be posited that board meetings and the related practices play an important in role in board's effectiveness, leading to firm performance.

#### **2.4.6 Board Size**

Board size is the number of members on the board. Identifying appropriate board size that affects its ability to function effectively has been a matter of continuing debate (Jensen 1993; Yermack, 1996; Dalton, Daily, Johnson & Ellstrand, 1999; Hermalin & Weisbach, 2003).

Some scholars have been in favour of smaller boards (e.g., Lipton & Lorsch, 1992; Jensen 1993; Yermack, 1996). Lipton and Lorsch (1992) support small boards, suggesting that larger groups face problems of social loafing and free riding. As board

increase in size, free riding increases and reduces the efficiency of the board. Jensen (1993) endorsed small boards because of efficiency in decision making due to greater coordination and lesser communication problems. Consistent with this notion, Yermack (1996) and Eisenberg, Sundgren, and Wells (1998) provide evidence that smaller boards are associated with higher firm value. Large boards are thought to be associated with problems of communication and cohesiveness and develop factions and conflict (O'Reilly, Caldwell & Barnett, 1989). Blue Ribbon Commission (NACD, 1995) opined that a board should be small enough to have thorough discussion, yet large enough to bring a variety of issues to the table.

Large boards were supported on the ground that they would provide greater monitoring and advice (Pfeffer, 1972; Klein, 1998; Adam & Mehran, 2003; Anderson, Mansi & Reeb, 2004; Coles, Daniel & Naveen, 2008). For example, Klein (1998) argues that CEO's need for advice will increase with complexity of the organisation. Diversified firms and those operating in multiple segments require greater need for advice (Hermalin & Weisbach, 1988; Yermack, 1996). However, Singh and Harianto (1989) found that large boards improve board performance by reducing CEO domination within board, thereby making it difficult to adopt golden parachute contracts that might not be in the shareholder's interest.

Board size is also found to be associated with Firm size. For example, Yermack (1996) and Coles et al. (2008) found that larger and diversified firms have a greater number of directors on the board. Boone, Field, Karpoff and Raheja (2007) also found that as firms become larger and more diversified, board size increased; but there are other variables such as managerial ownership, firm age, business segments, takeover defence mechanism, etc that would influence the board size. More complex firms require larger boards because of the difficulty of the monitoring task, offsetting the

coordination and communication problems identified by Jensen (1993) and Lipton and Lorsch (1993). Chaganti et al. (1985) find that compared to bankrupt firms, non-bankrupt firms have a larger boards, which suggests that large boards assist in firm survival.

Another strand of literature, from resource dependency perspective, suggests that boards are chosen to maximise the provision of important resources to the firm (Pfeffer, 1972; Pfeffer & Salancik, 1978; Klein, 1998; Hillman & Dalziel, 2003). Klein (1998) for instance suggests that advisory needs of the CEO increases with the extent to which the firm depends on the environment for resources. So, increasing board size links the organisation to its external environment and secures critical resources. In response to resource dependencies and regulatory pressures, organisations create large boards to encompass directors from different backgrounds (Pfeffer, 1972; Pearce & Zahra, 1992).

Lipton and Lorsch (1992) and Jensen (1993) observed that when corporate boards expand beyond seven or eight people, they are less likely to effectively control management and are easier for the CEO to dominate. Lorsch (1997) suggests that a board size of 12 members would lead to more effective discussion, while allowing for staffing of board committees.

As can be seen from the above discussion, literature shows mixed results; some supporting small boards (e.g., Yermack, 1996; Eisenberg, et al., 1998) and others supporting large boards (Singh & Harianto, 1989; Adam & Mehran, 2003). Few studies do not provide any support to the relationship between board composition and firm performance (Hermalin & Weisback, 1991; Bhagat & Black, 1999). Going by this, I consider that the firms benefit in having more directors for monitoring, resource provision and also to provide representation for different stakeholders in the firm.



## **2.5 Conclusion**

In this chapter, I discuss the critical role of boards in affecting firm performance. Further, I elaborate on four theoretical perspectives, viz., agency theory (management monitoring), stewardship theory (managerial empowerment), resource dependence theory (environment co-option) and stakeholder theory (equity among all stakeholders), that are important in a study of board characteristics – firm performance relationship. The chapter then identifies the important board characteristics that I examine in this dissertation. These include director ownership, CEO duality, gender diversity, board member's qualification and number of board meetings. With this background, I develop the research framework and hypotheses in the next chapter.

## CHAPTER 3

### **HYPOTHESES DEVELOPMENT**

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#### **3.1 Introduction**

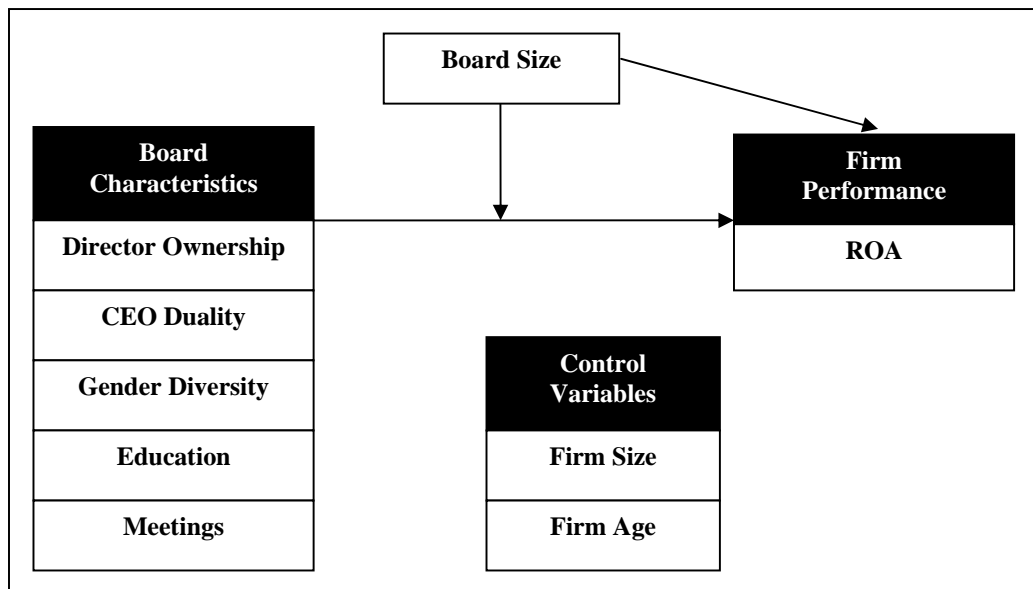
This chapter presents the conceptual framework of this thesis. Specifically, this chapter discusses the linkage between board characteristics and firm performance. I also elaborate on the moderating role of board size on relationship between other board characteristics and firm performance.

#### **3.2 Conceptual Framework**

As discussed in the previous chapter, much of the literature on the board's role has mainly been normative and prescriptive (e.g., Fama, 1980; Fama & Jensen, 1983; Lorsch & MacIver, 1989; Cadbury 1992). In the last decade, empirical studies were carried out to investigate the impact of board characteristics on firm performance (e.g., Bhagat & Black, 1999; Rhoades, et al., 2000; Kiel & Nicholson, 2003; Bonn, 2004; McIntyre et al., 2007; Fan et al., 2007). While most of the empirical studies have examined the direct relationship between board variables and firm performance, very few studies have considered the effect of moderating variables (e.g., Coles & Hesterly, 2000; Rhoades, Rechner & Sundaramurthy, 2001). Many scholars have recently called for investigation of moderating effects in studies linking board characteristics to firm performance (Finkelstein & Mooney, 2003; Letendre, 2004; Carpenter et al., 2004; Pye & Pettigrew, 2005). On the same lines, Hillman and Dalziel (2003) and Hendry and Kiel (2004) have proposed theoretical models for consideration of moderating variables on board performance. Evidence from empirical research nudges us to conclude that there

are several variables that influence the relationship between board characteristics and firm performance. Emphasising the importance of examining the moderating variables in process, Carpenter et al. (2004) concluded that the research which ignores the role of intervening variables in top management team process is no longer acceptable or publishable. To bridge this gap in literature, the study examines the relationship between board characteristics and firm performance, and considers the moderating role of board size.

Figure 3.1 presents the conceptual framework of this study. On the left hand side, I have listed board characteristics which comprise five variables namely, director ownership, CEO duality, gender diversity, education, and number of meetings. This is linked to the firm performance on the right hand side, which is measured by return on assets. The link between board characteristics and the firm performance is affected by another important board characteristic - board size.



**Figure 3.1: A Model of Board Characteristics and Firm Performance Link**

In the next section, I link the board characteristics to firm performance and present to develop the hypotheses.

### **3.3 Board Characteristics**

Board characteristics that should be examined for their impact on firm performance have been identified in the conceptual framework in figure 3.1. These characteristics are: director ownership, CEO duality, gender diversity, directors' education and board meetings. Each of these characteristics is discussed and relevant hypotheses developed in the following section.

#### **3.3.1 Director Ownership**

Berle and Means (1932) posited that ownership influences firm performance and suggested separation of ownership from control at the time when firms go public. Such separation of ownership and control is supported on the ground that it will improve professionalism through management expertise and firm-specific knowledge (Fama & Jensen, 1983). However, according to agency theory, separation of ownership and control results in conflict of interest (Berle & Means, 1932), which leads to expropriation by managers (Fama, 1980; Shleifer & Vishny, 1997). Stockholders would be interested in maximising the value of the firms, but managers might be concerned with enhancing their personal wealth and prestige. Boards of directors provide the monitoring mechanism to reduce the agency costs stemming from the divergence of interests between shareholders and managers (Fama & Jensen, 1983).

According to agency theory, the potential conflict can be dealt with by aligning the interests of the managers more closely with those of shareholders/owners by

increasing managers' stock ownership (Jensen & Meckling, 1976). It would re-unite the ownership and control through meaningful director stock ownership and hence better management-monitoring (Elson, 1996). Such alignment of interests would help in reducing the need for monitoring and mitigating agency costs.

McGregor (1967) argued that that conflict need not exist when an individual identifies with an organisation and then self consciously directs his efforts towards the organisational goals. This view is supported by Davis et al. (1997) who suggest that managers and shareholders do not have any inherent conflict. In fact, professional managers have a higher level of commitment to the organisation and its goals than shareholders who may only be interested in short term returns. Further, Fama (1980) and Shleifer and Vishny (1997) mention the existence of positive link between reputation and compensation of directors. Reputation is important to directors as it helps them in career growth and compensation. In many instances, the directors who perform effectively are further compensated by way of stock for their performance (Elson, 1996).

Many empirical studies attest that managerial ownership improves firm performance (e.g., Jensen & Murphy, 1990; Chung & Pruitt, 1996; Palia & Lichtenberg, 1999). Brickley et al. (1988) argue that stock ownership by managers and board members gives them an incentive to ensure that the firm is run efficiently and to monitor managers carefully. But other studies were not so clear about the relationship between managerial ownership and firm performance. De Angelo and De Angelo (1985) mentioned that high level of managerial ownership will entrench management and create agency problems. Morck et al. (1988) and Shleifer and Vishny (1997) expect the potential of manipulation of firm results by management to favour themselves. Becht et al. (2005) argue that stock options would enable CEOs to enrich themselves and

expropriate shareholders. Some other scholars find that managerial ownership is endogenously determined (Demsetz & Lehn, 1985; Loderer & Martin, 1997; Cho, 1998).

In spite of some inconclusive results, there is an overwhelming support for the notion that director ownership results in aligning the interests of both owners and the management and provides a means to monitor risk taking behaviour of managers (Fama 1980; Jensen and Meckling, 1976; Bebchuk, et al., 2002; Chung and Pruitt, 1996; Core, Holthausen & Larcker, 1999; Becht et al., 2005). This alignment of interests can also ease free-ride problem of monitoring to increase the effectiveness of the board (Shleifer & Vishny, 1996). From the stewardship perspective, the professional directors/managers and shareholder do not have any conflict of interest and have convergence of interests with organisational goals (Donaldson & Davis, 1994; Davis et al., 1997). Therefore, alignment of interests of directors and shareholders through director ownership is expected to improve firm performance. Accordingly, I propose:

***H1: Director ownership is positively associated with firm performance.***

### **3.3.2 CEO Duality**

Leighton and Thain (1993), and Lechem, (2002) underscore the critical role played by the board Chair in the decision making and effective monitoring of the management, headed by the Chief executive. However, in many instances, these two positions are combined in one person to create a unified leadership. While agency theorists support separation of the two positions to improve management monitoring, stewardship theorists endorse CEO duality to provide effective leadership to the organisation (Finkelstein & D'Aveni, 1994).

Different studies on the issue of CEO duality have yielded mixed results. Lipton and Lorsch (1993), Worrell, Nemeec and Davidson (1997), Carlsson (2001) oppose CEO

duality on the ground that it compromises the monitoring role of the board due to conflict of interest. They contend that CEO duality makes board inadequate and powerless in the face of a strong CEO. Lorsch and MacIver (1989) have raised the question of whether directors are pawns or potentates vis-à-vis the CEO. Further, Rechner and Dalton (1991) have found that firms without CEO duality consistently outperformed firms, in which CEOs had a dual role.

In contrast, supporters of CEO duality (Anderson & Anthony, 1986; Donaldson & Davis, 1991; Charan, 1998) have argued against separation of chair and CEO positions, on the ground that the firm will not have the unified focus of its energies necessary to realise its goals. They assert that firm performance can be enhanced, when the CEO has full authority over his firm by serving in the position of chair as well. Boyd (1995) found that duality actually led to better performance among the US firms. Yet another set of scholars (Daily & Dalton, 1997; Dalton et al., 1998; Weir & Laing, 1999, Abdullah, 2004) have found no significant difference between the firms with CEO duality and those without.

In a recent meta-analysis, Rhoades et al. (2001) provided support for the contingency view that context of the study moderates the relationship between CEO duality and firm performance. For instance, CEO duality and firm performance are positively related in the anti-takeover studies and negatively related in the compensation studies. Emphasising the importance of context on the study of CEO duality, Rhoades et al. (2001) observe, "... our findings highlight the value of studying *the situations when* "two" heads are better than one, rather than exploring *whether* "two" heads are better than one. Obviously further research is required to increase our understanding on this matter."

In US firms, CEO duality is as high as 80 – 84 per cent (Lorsch & MacIver, 1989; Core et al., 1999; Vafeas, 1999). Such concentration of power in the hands of CEO will result in making the board ‘a rubber’ (Rechner, 1989). The CEO duality is likely to result in agency problems, impairing effectiveness of board in management monitoring (Jensen, 1993; Strickland, Wiles & Zenner, 1996). It is also considered an impediment to board’s flexibility in performing one of its core duties of replacing a poorly performing CEO (Goyal & Park, 2002) and is associated with excessive compensation (Core et al., 1999). So, presence of CEO duality is likely to adversely affect firm performance. Given the similarity of New Zealand context with the US context, I propose the following hypothesis:

***H2: CEO duality is negatively associated with firm performance.***

### **3.3.3 Gender Diversity**

Gender diversity on boards is supported on the ground that it reflects social structure by providing equitable representation (Keasey et al., 1997), allows access to broader talent pools (Pearce & Zahra, 1991; Singh & Vinicombe, 2004) and diverse perspectives by individual board members (Milliken & Martins, 1996; Biggins, 1999). Such diversity helps firms through creativity and effective problem-solving (Robinson & Dechant, 1997).

Currently, women’s representation on board’s in the US and UK range from 6.4 per cent to 12.4 per cent (cited in Singh & Vinnicombe, 2004). However, Daily et al., (2000) found a growing representation of women on the boards. Since women generally face glass ceiling in the corporate sector, majority of them are likely to be from public sector (Hillman et al., 2002). Because of a non-corporate background, women are far more likely to hold valuable, unique, and rare information to provide a different



perspective during board discussions. Even the women directors that come from the corporate sector, are likely to possess skills in specific areas such as legal, human resources, communication and public relations. This provides a good contrast to the skill set possessed by men who are more likely to be specialists in functional areas such as operations, marketing and accounting (Zelechowski & Bilimoria, 2004). The different range of experiences brought by women is found to be good for governance (Fondas & Sassalos, 2000).

Scholars have argued that women members on board would benefit the firm governance through an influx of skills, abilities, fresh perspectives and weaving of new dynamics to board deliberations (Jamali et al., 2007). On an average, women are found to be younger than their male counterparts and so the board benefits from infusion of new ideas and approaches to deliberations (Bilimoria & Wheeler, 2000). Women also differ in their views, values and ways to express their opinions. This is likely to result in their questioning the conventional wisdom and more open discussions (Fondas & Sassalos, 2000; Huse & Solberg, 2006). Such diverse view points by women directors will provoke lively boardroom discussions (Letendre, 2004), enhancing the quality of decision making.

In a commercial context, having women directors makes a business sense as they make majority of the purchases (Daily et al., 1999) and therefore, can bring perspectives on women's products/market issues (Burke, 2003). Consistent with the notion that gender diversity will add value to the firm, recent studies have found a significant positive relationship between presence of women and firm performance (Carter et al., 2003; Bonn, 2004; Smith et al., 2006).

In summary, it can be argued that the presence of women directors leads to better board dynamics and improved firm performance compared to firms with boards composed of solely one gender. This leads to the following hypothesis:

***H3: The number of women directors is positively related to firm performance.***

### **3.3.4 Educational Qualification**

Effective board functioning requires individuals with “high levels of intellectual ability, experience, soundness of judgement and integrity” (Hilmer, 1998, p. 62). Nomination of people with higher educational qualifications on board of directors will represent skills and competences as firms face demands for more sophisticated talent to improve organisational effectiveness. Diverse boards means diverse strategic skills and competencies, which are critical elements of good corporate governance (Biggins, 1999).

Giving representation on boards to individuals with higher qualifications satisfies the expectations of board diversity (Milliken & Martins, 1996), need for merit (Burton, 1991) and widens the base of wisdom (Carver, 2002). Boards with highly qualified people provides for ability and expertise necessary for effective decision making process (Milliken & Martins, 1996).

Board members with higher qualifications would extend knowledge base and stimulate board members to consider other alternatives and enhance a more thoughtful processing of problems (Cox & Blake, 1991). Qualified members will provide a rich source of innovative ideas to develop policy initiatives with analytical depth and rigour necessary for offering unique perspectives on strategic issues (Westphal & Milton, 2000). On the contrary, lack of diversity [and qualified members] on the board would result in lack of critical thinking and innovation (Mattis, 2000). Yermack (2006) found

share price reactions to be sensitive to directors' professional qualifications, particularly in the area of accounting and finance (Yermack, 2006). Given the importance of educational qualifications, they are included in the index for evaluating corporations' adherence to corporate governance (Institutional Shareholder Service, 2006).

The above discussion shows the importance of qualified members on board for delivering improved firm performance (Hanifa & Cooke, 2002; Smith et al., 2006). Compared to general education, a PhD programme provides skills for more in-depth investigation and rigorous analysis of issues. However, no study has examined the influence of PhD qualifications of board members on firm performance. Given the importance of education in general, I expect that firms which have a higher number of board members with PhD qualification will perform better than those which have a lower number of PhD qualified board members. Accordingly:

***H4: The number of directors with PhD qualifications is positively associated with firm performance.***

### **3.3.5 Board Meetings**

Effectiveness of a board depends on how often the board members meet to discuss the various issues facing a firm (Vafeas, 1999; Carcello, et al., 2002). Diligent boards will enhance the level of oversight, resulting in improved firm performance. In addition to board meetings, board diligence includes other aspects such as preparation before meetings, attentiveness, participation during meetings and post-meeting follow-up (Carcello et al., 2002). Of these, only board meetings are a visible and documented public activity.

Conger et al. (1998) views board meetings as an important resource in improving the effectiveness of the board. Increase in board meetings is considered to represent the

intensity of board activity (Vafeas, 1999). Scholars (e.g., Lipton & Lorsch, 1992; Byrne, 1996) suggest that boards that meet frequently are more likely to perform their duties diligently to protect shareholders interests. Specifically Vafeas (1999) finds a significant association of board meetings and firm performance. Beasley et al. (2000) find that firms with fraud record had less number of audit committee meetings than those without fraud record. Lawler et al. (2002) found that board practices are positively related to firm performance. However, Uzun, Szewczyk & Varma (2004) did not find any significant difference in board meetings of firms involved in fraud and those with no-fraud record.

From the agency perspective, the main responsibility of the board is management monitoring to mitigate agency costs and appropriation by the managers. Effectiveness of boards can be improved when boards meet regularly (Latendre, 2004) and demonstrate greater diligence (Carcello, et al., 2002). Zahra and Pearce (1989) posit that effective meetings are essential for successful board performance. As an agency monitoring mechanism, it would be easy to increase the frequency of board meetings to attain better governance than to change the other characteristics of the board, for example, director ownership or gender diversity (Vafeas, 1999). Lawler et al. (2002) demonstrated the positive relationship between effective board practices and firm performance.

Overall, board meetings are viewed as a resource leading to board diligence. They also benefit the board by providing more time for directors to confer, set strategy, and monitor management effectively. Increasing the number of meetings, compared to changing other board characteristics, is relatively an inexpensive way for firms to not only protect shareholder value but also improve firm performance. This discussion leads to the following hypothesis:

***H5: Board meetings are positively associated with firm performance***

### **3.3.6 Board Size**

Role of Board size has been a matter of continued debate from different perspectives (Jensen 1993; Yermack, 1996; Dalton et al., 1999; Hermalin & Weisbach, 2003). While some have suggested smaller boards enhance firm performance (e.g., Lipton & Lorsch, 1992; Jensen 1993; Yermack, 1996) others have suggested larger boards are better for improving firm performance (Pfeffer, 1972; Klein, 1998; Adam & Mehran, 2003; Anderson et al., 2004; Coles et al., 2008).

Scholars have argued for smaller boards on grounds of easy co-ordination, cohesiveness and communication (Jensen, 1993) and to avoid social loafing and free-riding (Lipton & Lorsch, 1992). As the size of the board increases, interpersonal communication becomes less effective. As the board size increases, problems of communication and coordination manifest and are likely to develop factions and conflict (O'Reilly et al., 1989). Empirical studies by Yermack (1996) and Eisenberg et al. (1998) provide evidence that smaller boards are associated with higher firm value.

On the other hand, large boards may be more useful to firms on grounds such as advice to CEO and greater monitoring of management (Pfeffer, 1972; Klein, 1998; Adam & Mehran, 2003; Anderson et al., 2004; Coles et al., 2008). Klein (1998) argues that the need for advice for CEO will increase with organisational complexity. Klein further suggests that the advisory needs of CEO increases with the extent of firm's dependence on environmental resources. So, increasing board size helps businesses to manage the environment (Pfeffer, 1972; Pearce & Zahra, 1992).

From an agency theory perspective, larger boards allow for effective monitoring by reducing the domination of the CEO within the board and protect shareholders interests (Singh & Harianto, 1989). According to Hermalin and Weishbach (1998), board effectiveness is a function of its independence. The independence of a board

depends on the negotiations between the board and the CEO. A larger board improved the bargaining position of the board vis-à-vis the CEO and thus, make the board more effective in monitoring the management. Further, a larger board will also make it easy to create committees to delegate specialised responsibilities.

Resource dependency theory suggests that boards are chosen to maximise the provision of important resources to the firm (Pfeffer, 1972; Pfeffer & Salancik, 1978; Klein, 1998; Hillman & Dalziel, 2003). Klein (1998), for instance, suggests that advisory needs of the CEO also increase with the firm's dependence on the environment for resources. So, increasing board size links the organisation to its external environment and secures critical resources. In response to resource dependencies and regulatory pressures, organisations create large boards to encompass directors from different backgrounds (Pfeffer, 1972; Pearce & Zahra, 1992).

In short, while the smaller boards allows domination of board by CEO resulting in agency costs, larger boards benefit firms by providing effective oversight of management, making available necessary resources and allowing for representation of different stakeholders in the firm. These benefits provided by large boards help in firm performance. Consequently, I propose the following:

***H6: There is positive relationship between board size and firm performance.***

### **3.4 Moderating role of board size on firm performance**

The above discussion on board size suggests the besides its direct effect, board size may also moderate the effect of other board characteristics on firm performance. In the following sections, I propose hypotheses for the moderating role of board size.

With respect to the director ownership, a higher director ownership is expected to align the interests of both shareholders and managers, and thereby improve the monitoring of the management (Jensen and Murphy, 1990; Elson, 1996; Becht et al., 2005). Board size generally increases with increase in representation for non-executive directors, indicating improvement in board independence. Bathala and Rao (1995) and Provest et al., (2002) have documented that inside ownership and leverage and non-executives are substitutable monitoring mechanisms of the board. On that basis, if the board size increases, the firm is expected to be positively influenced by both increased level of director ownership through alignment of interests as well as from the increase in the board size for effective monitoring of management. Accordingly, it is hypothesised that:

**H7: Board size moderates the relationship between director ownership and firm performance such that with an increase in board size, firms with higher level of director ownership perform better.**

Board size also has effect on CEO duality. As the board size increases, representation of outsiders also increases (Lehn, Patro & Zhao, 2004). This implies an increase in the board independence along with a simultaneous decrease in CEOs influence (Hermalin & Weisbach, 1998). Therefore, a larger board helps in effective oversight of management. To facilitate improved monitoring role of the board to mitigate the agency costs, positions of Chair and CEO are separated. An independent chair is likely to be more effective if the chair has a backing of a larger number of board members. Thus, as the board size increases, firms with absence of CEO duality will perform better and those with presence of CEO duality will perform worse. It is therefore hypothesised that:

**H8: Board size moderates the relationship between CEO duality and firm performance such that a larger board will enhance the negative effect of CEO duality on firm performance.**

While, Boone et al. (2007) found that board size continues to increase even after 10 years of incorporation, Carter et al. (2003) document that women's representation on boards also increase with board size. It implies that women don't replace men on boards but get representation as the board size increases, indicating a corresponding increase in both board size and women on boards. Erhardt, Werbel & Shrader (2003) and Bonn (2004) found positive relationship between gender diversity and firm performance. A larger board thus provides more opportunities for gender diversity, as well as for smooth functioning of the women members of the board. Therefore, I hypothesize:

**H9: Boards size moderates the relationship between gender diversity and firm performance such that women representation in the board has a more positive effect for firms with larger boards than for firms with smaller boards.**

Board diversity requires representation to different segments of society and is found to be positively associated with firm performance (Erhardt et al., 2003). As the firm increases in complexity, the board size also increased (Boone et al., 2007). The more the representation, the larger will be the size of the board. It implies that the diversity of board is made possible by increasing the board size. When the board size is increased by increasing representation to outsiders, it is likely that there will be more qualified board members in general, and those with PhDs in particular, to acquire the talent and skills required for both monitoring and boundary spanning. Such highly



qualified members are considered a strategic resource and provide a link to different external resources (Ingley & van der Walt, 2001). A larger board will provide a more conducive environment for more educated members to contribute than a smaller board. Hence I expect board size to moderate the relationship between number of PhDs and firm performance.

**H10: Boards size moderates the relationship between number of PhDs in the board and firm performance such that a higher number of PhDs will have a more positive effect for firms with larger boards than for firms with smaller boards.**

Finally, board size is also likely to moderate the effect of board meetings on firm performance. While, board meetings are found to be associated with firm performance (e.g., Vafeas, 1999; Lawler et al., 2002), Carcello et al. (2002) documents that quality of audit work improves with board meetings. Further, as the board size increases, more resources are available for the board that adds value to the board outcomes. There is also need for more interaction between members to discuss the complexity of the firm (Boone et al., 2007). The benefits of more meetings will however not be available if firms have smaller boards as board members will be constrained on time to discharge their duties. Accordingly I hypothesize:

**H11: Boards size moderates the relationship between board meetings and firm performance such that as the board meetings have a more positive effect for firms with larger boards than for firms with smaller boards.**

### **3.5 Conclusion**

On the basis of the wide coverage of literature review in the in the area of board characteristics and corporate governance in the preceding chapter, this chapter proposed the conceptual framework. In brief, I hypothesised that various board characteristics such as board size, director ownership, women members on board, members with PhD and number of board meetings are positively associated with firm performance. However, I hypothesized CEO duality to be negatively associated with firm performance. Further, I hypothesized board size as a moderating variable for the relationship between other board characteristics and firm performance.

## CHAPTER 4

### **RESEARCH DESIGN AND METHODOLOGY**

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#### **4.1 Introduction**

The thesis seeks to examine the relationship between top management teams and its effect on firm performance. In particular, it takes a governance perspective to investigate the impact of board characteristics on firm performance. This chapter presents the methodology used to test the research framework and a set of research hypotheses presented in chapter 3. The following sections discuss the data collection procedure, the operationalisation and measurement of the variables, the sampling and the analytic procedure used in this research.

#### **4.2 Sample**

The sample consists of all the firms listed on New Zealand stock exchange as on November 2007. In total, there are 156 listed firms at this time. I selected my sample from publicly listed firms because these firms are the top enterprises in New Zealand. Being the top firms in the country, they are likely to possess greatest potential to attract and employ skilled and competent individuals on the board of directors, and also to gain a pay-off from such well-constructed boards. These firms have good access to capital and other resources necessary not only for survival but also for improving their performance and competitive position.

I collected data on these 156 firms for a recent four year time period, from 2004 to 2007. For 12 of these firms, I did not get data for 2007 as the same was not available at the time of data collection. Some of these firms got listed in the stock exchange after

2004, in which case, I collected data only for the years after the firm was listed in the stock exchange. Many firms did not have information on key explanatory variables of this study, and therefore dropped out. As a result, the final sample comprised 207 firm-year observations of 61 firms.

### **4.3 Data Sources**

The data for this study comes from multiple sources of secondary data. The base data comes from the NZX Data Deep Archive, which has all the annual reports of the listed firms. I downloaded the annual reports for the four years (2004-2007) for all the listed firms. The data on board characteristics comes from these annual reports. In addition, I collected the data on firm performance and firm size from IRG Online Research database. In the sample, I had a few firms that are listed in both Australia and New Zealand Stock Exchanges. In such cases, I finalised the figures after comparing the data collected from NZX Data Deep Archive and the data from DataStream. In case of any discrepancy, I also accessed the firms' websites for checking the validity of the data.

Information about firm age was collected from the website of New Zealand Companies office (2007). The year of incorporation was taken as the foundation year of each firm, which, in many cases, differed with the year of their listing on New Zealand Stock Exchange.

### **4.4 Variables**

#### **4.4.1 Dependent Variable (Firm Performance)**

Empirical examination of impact of board characteristics on firm requires selection of appropriate performance measures for objective analysis. Unbiased

performance measurement is necessary for both strategic and diagnostic purposes. Though there has been a debate regarding what constitutes corporate performance (e.g., Cochran & Wood, 1984; Ittner & Larcker, 2003) most studies examining the role of boards have traditionally used a variety of financial measures: Tobin's Q or its proxy (Yermack, 1996; Weir et al., 2002; Kiel & Nicholson, 2003), return on investment (Boyd, 1995; Adjaoud, Zeghal & Andaleeb, 2007), return on assets (Zajac & Westphal, 1996; Shrader, Blackburn & Iles, 1997; Kiel & Nicholson, 2003), sales revenue (Bhagat et al., 1999), return on equity (Bhagat et al., 1999; Adjaoud et al., 2007), stock returns (Bhagat et al., 1999), earnings per share (Adjaoud et al., 2007), net profit margin (Bauer, Guenster & Otten, 2004) and economic value added (Adjaoud et al., 2007).

The measures used in the extant literature can be categorised into two broad sets: accounting based measures and market based measures. Utility of each of these measures has been criticised by different authors. For example, accounting measures were criticised on the ground that they are backward looking and constrained by professional accounting standards in each country. On the other hand, market based measures such as Tobin's Q is based on the perception of investors and thus affected by their psychology and influenced by the estimates of future events such as herd behaviour, manipulation etc. (Kapopoulos & Lazaretou, 2007). Similarly, while Stewart (1991) observes that earning related measures are misleading measures, Biddle, Bowen & Wallace (1997) find that earning based measures outperform economic value added (EVA) measure.

For the purpose of the study, I use an accounting based measure, viz., return on assets (ROA). ROA has been used in many studies on board performance (Zajac & Westphal, 1996; Shrader et al., 1997; Kiel & Nicholson, 2003; Carter et al., 2003; Erhardt et al., 2003). ROA is an indicator of what management has accomplished with the given resources (assets). According to agency theory, managers are likely to squander profits

and misappropriate, leaving less returns for shareholders. ROA is directly related to management's ability to efficiently utilise corporate assets, which ultimately belong to shareholders. A lower return on assets will indicate inefficiency. Further, Carter et al. (2003) found that ROA is significant in explaining Tobin's Q and the firm value. For these reasons, ROA is considered a robust measure of firm performance and accordingly I use ROA in this study.

#### **4.4.2 Explanatory Variables**

The explanatory variables include Director ownership, CEO duality, number of women on the board, number of directors with PhD, number of board meetings conducted annually, size of the board.

##### **4.4.2.1 Director Ownership**

Agency theorists such as Berle and Means (1936), Jensen and Meckling (1976) and Eisenhardt (1989) argued for separation of ownership and control to reduce agency problems and improve firm performance. However, others scholars (e.g., Brickley et al., 1988; Davis et al., 1997; Shleifer & Vishny, 1997; Becht et al., 2005) have suggested alignment of interests between firm owners and firm managers through managerial ownership. In this study, director ownership refers to proportion of shareholding owned by the directors among the total firm shares outstanding in a particular year. Director ownership includes both the executive and non-executive directors as suitable variable for examining alignment of interests between owners and managers. According to Bhagat et al. (1999), all the extant literature on director ownership and corporate performance has considered the percentage of director holding as the appropriate measure of director

ownership. A similar approach was followed by other studies such as Cho (1998), Bhagat et al. (1999) and Palia and Lichtenberg (1999).

#### **4.4.2.2 CEO Duality**

CEO Duality refers to a situation where the same person serves the role of the CEO of the firm as well as the chairman of the board. CEO duality is supported on the ground of unified leadership (Boyd, 1995; Charan, 1998), but it is also found to promote entrenchment and weaken board monitoring effectiveness (Finkelstein & D'Aveni, 1994; Worrell et al., 1997; Carlsson, 2001). Some studies refer to absence of CEO duality as 'Independent Chairman' (e.g., Coles & Hesterly, 2000). Following other studies (Boyd, 1995; Muth & Donaldson, 1998; Weir et al., 2002; Abdullah, 2004; McIntyre et al., 2007), I examine this variable using a dummy variable, which takes a value of 1 if the CEO and chairman are the same person and 0 otherwise.

#### **4.4.2.3 Women directors**

Traditionally, boards were composed of only male members. Gender diversity by way of presence of women in the board leads to greater board diversity. Diversity in general is considered to improve organisational value and performance as it provides new insights and perspectives (Fondas & Sassalos, 2000; Carter et al., 2003; Latendre, 2004; Huse & Solberg, 2006) and provides for representation of different stakeholders for equity and fairness (Keasey et al., 1997). Following Tacheva and Huse (2006), I measure gender diversity by a simple count of female board members. I take a natural logarithm of this count variable after adding 1 to make the distribution more normal.

#### **4.4.2.4 Directors with PhDs**

Higher level of educational qualification like PhD will function as a strategic resource (Ingley & van der Walt, 2001). It will also act as a mix of competencies and capabilities that help in executing the governance function (Carpenter & Westphal, 2001). However, no previous study has considered any specific linkage between board members with PhD and their impact on firm performance. I therefore use the same approach taken by Tacheva and Huse (2006) for considering the representation of women on boards. Accordingly, number of members with PhD qualification is taken into account. I take a natural logarithm of this variable after adding 1.

#### **4.4.2.5 Board meetings**

Board meetings are part of the board process and considered as an indication of board diligence (Carcello et al., 2002). Increase in board meetings is viewed as intensity in board activity (Vafeas, 1999). Various studies examined the impact of board meetings by considering the frequency or number of meetings (Vafeas, 1999; Beasley et al., 2000; Carcello et al., 2002). For this study, I use the same approach and measure board meetings by the number of meetings held annually by the board of directors. To meet the statistical requirements of normal distribution, natural logarithm is taken after adding 1 to the count of meetings.

#### **4.4.2.6 Board Size**

Board size is an indication of both monitoring role and advisory role (e.g., Hermalin & Weisbach, 1988; Klein, 1998; Adam & Mehran, 2003, Anderson et al., 2004; Coles et al., 2008). The size of the board is also found to increase with firm age and firm size (Coles et al., 2008). To examine its effect, various studies measure board size by the total



number of directors on the board of directors of a firm (e.g., Yermach, 1996; Bhagat & Black, 2002; Adam & Mehran, 2003; Bonn, 2004; Coles et al., 2008). I use the number of members in the board as a measure of board size.

#### **4.4.3 Control Variables**

In order to identify the specific effect of board characteristics on firm performance, I control for the effect of firm size and firm age. Firm size and age were found to covary with many board characteristics and other governance variables (e.g., Fiegener, Brown, Dreux & Dennis, 2000; Kiel & Nicholson, 2003).

##### **4.4.3.1 Firm Size**

Booth et al. (2002) and Peasnell et al. (2003) have suggested that internal governance structures are substitutable and the firms can choose appropriate governance options based on what is right for them. For example, as the complexity of the firm increases, board size may increase due to need for advice and environment monitoring (Pfeffer & Salancik, 1978; Zahra & Pearce, 1989). In that case, CEO duality may be dropped as a trade-off in favour of director/insider ownership to ensure firm performance through alignment of interests between shareholders and directors. Further, separation of CEO and Chair positions would allow Chair to serve as a sounding board for the CEO or become source of confidential counsel to CEO. As the firm complexity changes, the board characteristics also may vary. Boone et al. (2007) found that as firms become larger and more diversified, the size of the board increases. Firm size is, therefore, taken as a proxy for the complexity of the firm and the need for higher amount of advice to the board (Fama & Jensen, 1983; Booth & Deli, 1996)

Large size of the firm is often associated with complex operations of the firm as it seeks to perform its strategic role more actively. Dalton et al. (1998) found that small firms have better impact of board size than large firms. Similarly, Lehn et al. (2004) found that board size is positively related to firm size but negatively related to growth opportunities. The scale and complexity of large firm would cloud any relationship between board characteristics and firm performance. As the firm size increases, the agency costs are expected to increase since a large span allows for greater managerial discretion and opportunism, resulting in increased monitoring (Jensen & Meckling, 1976). On the other hand, as firms grow, they increase the investment in internal control mechanisms for planning and control (e.g., accounting and information systems). This may reduce not only the monitoring intensity but also need for alignment of interests through director ownership.

Obviously, these changes in the firm size are likely to affect different characteristics of the board. Hence the firm size is included as a control variable in this study to examine the effect of board characteristics on firm performance. Two of the most widely used proxies for firm size are sales revenue and number of employees (Muth & Donaldson, 1998). For this study, sales revenue is used as a proxy for firm size. Sales revenue is calculated as sum of turnover, interest, and other income. Firm size is measured by the natural logarithm of sales revenue.

#### **4.4.3.2 Firm Age**

Firm age refers to the number of years for which a firm has been in operation. Firm age has been linked to many decisions of the firm (Berger & Udell, 1998; Gregory, Rutherford, Oswald & Gardiner, 2005; Boone et al., 2007). For example, Berger and Udell (1998) and Gregory et al. (2005) demonstrate that firms go through financial

growth cycle and their capital structures vary with the age. Boone et al. (2007) found that as firms grow, boards also grow in response to the increasing needs and benefits of monitoring and specialisation by board members. However, the magnitude of these relationships may differ. For example, board size and composition reflects a trade-off between specific benefits of monitoring and costs of such monitoring (Raheja, 2005).

Newer firms are expected to have smaller earnings than older ones because they have less experience in the market, are still building their market position, and normally have a higher costs structure (Lipczinsky & Wilson, 2001). On the other hand older firms may be reaching the end of their product life cycle. Further, Boone et al. (2007) also suggest that complexity increases with firm age. In view of the uncertain relationships of firm age on board characteristics as well as firm performance, it is decided to control for firm age. Firm age is measured by the number of years from the time the firm was incorporated.

Table 4.1 provides a list of variables used for this study and their operationalisation.

**Table 4.1: Board characteristics and firm performance variables**

<b>Serial Number</b>	<b>Variable Name</b>	<b>Operationalisation of the variable</b>
	<i>Dependent Variable</i>	
1	Return on assets (ROA)	Ratio of EBIT/Total Assets.
	<i>Explanatory Variables</i>	
2	Director ownership (Dir Own)	Proportion of stock owned by directors in net common stock; natural logarithm is taken to the ratio of director ownership.
3	CEO duality (CEO Dual)	Coded '1' if CEO also holds the position of board chair or '0' if both positions are separated
4	Women members (Women)	Number of women present on the board; natural logarithm is taken after adding 1 to all firms to meet statistical requirement of normal distribution.
5	Members with PhDs (PhDs)	Number of members with PhD present on the board; natural logarithm is taken after adding 1 to all firms to meet the statistical requirements of normal distribution.
6	Board meetings (Board Meet)	Number of board meetings held per year
7	Board size (Board Size)	Number of directors on the board; natural logarithm is taken.
	<i>Control Variables</i>	
8	Firm Size (Firm Size)	Amount of sales revenue per year.
9	Firm Age (Firm Age)	Number of years since incorporation

## 4.5 Analytic Procedure

I examined the impact of board characteristics on firm performance using a firm-year unit of analysis. With firm-year records, I applied Generalised Least Square (GLS) Random-Effects models to test the hypotheses. I preferred a GLS regression over pooled OLS regression due to the important assumptions of homoskedasticity and no serial correlation in Pooled OLS (Wooldridge, 2002). Pooled OLS requires the errors in each time period to be uncorrelated with the explanatory variables in the same time period, for the estimator to be consistent and unbiased. A GLS regression is more suitable in that it

corrects for the omitted variable bias, and presence of autocorrelation and heteroskedasticity in pooled time series data. This methodology allows researchers to examine variations among cross-sectional units simultaneously with variations within individual units over time (Gaur & Gaur, 2006). It assumes that regression parameters do not change over time and do not differ between various cross-sectional units, enhancing the reliability of the coefficient estimates.

An important assumption for choosing random-effect estimation is that the unobserved heterogeneity should not be correlated with the independent variables. I tested for this assumption and appropriateness of random-effects estimation using Hausman test. The insignificant Hausman test statistic suggested that the assumptions for random effects estimation were not violated.

Before performing the regression analyses, I examined the variables for multicollinearity following the procedure in Hair, Anderson, Tatham & Black, (1998). The VIF values were lower than the threshold value of 10, suggested by Hair et al. (1998, p. 193). I tested the following base model:

$$\text{Firm Performance} = f(\text{director ownership, CEO duality, women members, PhD members, board meetings and board size})$$

Then, the moderating effect of the board size on other board characteristics affecting firm performance was examined. For this the interaction of board size with each of the explanatory variables was entered one by one in five different models. This approach is appropriate as it makes the measurement and interpretation of the coefficient of interaction terms easy. If more than one interaction term involving common variable is entered, it becomes difficult to interpret the interaction term as the coefficient of interaction term is dependent on other variables entered in the equation. Entering one interaction term at a time also reduces the problem of multicollinearity due to high

correlation between the interaction term and other explanatory variables. Thus there are six models in all; one base model and five interaction models. In all the six models, I controlled for firm size and firm age.

## **4.6 Privacy**

For the purpose of the research analysis and findings, only the aggregate performance results of all the firms were used. No information that will in any way identify individual directors or firms was revealed; their identity and confidentiality was not compromised in any manner. The provisions of the New Zealand Privacy Act 1993 were observed.

## **4.7 Conclusion**

This chapter describes the sample and data sources used in this study. Variables were also defined and a summary of operationalisation of the variables are given. It also explains the method used for data analysis to test the hypotheses. Finally the privacy issues are discussed.

## CHAPTER 5

### RESULTS AND DISCUSSION

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#### 5.1 Introduction

This chapter presents the results of the study. It has three sections. First, the sample characteristics and descriptive statistics are described. This is followed by presentation of results from data analyses. Final section discusses the results.

#### 5.2 Sample Characteristics

Our base sample comprised 156 firms, listed in the New Zealand stock exchange. I collected data for four years from 2004 to 2007. I had to remove some firms from final analyses due to unavailability of data on key variables. As a result, the final sample comprised 207 firm-year observations of 61 firms. Table 5.1 and 5.2 present the sample characteristics.

**Table 5.1: Frequency of board characteristics**

Frequency	Board Size (%)	PhDs (%)	Women (%)	CEO Duality (%)
0	-	74.9	71.2	96.7
1	-	17.3	21.4	3.3
2	0.4	4.9	6.6	-
3	10.1	1.8	0.8	-
4	15.8	0.8	-	-
5	19.2	0.3	-	-
6	23.8	-	-	-
7	13.1	-	-	-
8	10.7	-	-	-
9	2.6	-	-	-
10	2.4	-	-	-
11 – 13	0.7	-	-	-
12	0.7	-	-	-
13	0.6	-	-	-
Total Percentage	100	100	100	100

Table 5.1 points out that board size ranges from 2 to 13 members. Regarding the educational qualification, three-quarters of the firms (74.9 percent) do not have any board member with PhD. Among the quarter of firms who have PhDs on their board, most of the firms have only one member (17.3 %). Only 8 per cent of the firms have two or more PhD members on their board, the maximum number being five PhDs. Majority of the firms (71.2 %) do not have any representation for women on their boards. Even in the case of firms, which do have women members, the number is not large. CEO duality is rarely seen in New Zealand firms with only 3.3 percent of the firms following this type of leadership structure and an over whelming majority of the firms (96.7 %) opting for independent chairman.

**Table 5.2: Descriptive statistics**

<b>Variables*</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Firm Size</b> (Rev in NZ\$ ml)	283796	774268	4	5973000
<b>Firm Age</b> (years)	18.04	20.57	1.00	102
<b>Board Size</b> (#)	5.81	1.92	2.00	13.00
<b>Dir Own</b> (% shares)	17.93	23.66	0.00	100.00
<b>CEO Dual</b> (1 or 0)	0.03	0.18	0.00	1.00
<b>Women</b> (#)	0.37	0.64	0.00	3.00
<b>Board meet</b> (#)	9.29	3.71	0.00	22.00
<b>PhDs</b> (#)	0.37	0.77	0.00	5.00
<b>ROA</b> (EBIT/Total Assets)	-0.02	0.76	-13.10	1.13
<b>EBIT</b> (NZ\$ml)	167797	1092829	-6512000	13519000
<b>Total Assets</b>	3077837	25105432	151	392500000

\*Sample size (n) = 207 firm year observations during the years 2003 – 2006 or 2004 – 2007, based on the availability of data

Table 5.2 presents the descriptive statistics. The average board size is about 6 members (mean = 5.81). The board size in New Zealand appears to be much smaller than the board size in the US (e.g., mean size of 11.45 in Bhagat & Black, 2002) but comparable to the size of boards in Australia (e.g., mean size of 6.6 in Kiel & Nicholson,



2003). The average share of director ownership is 17.93 per cent, with a range of 0 to 100 percent. The average number of board meetings in a year is 9.29.

The average ROA was -0.02, with a minimum of -13.10 to a maximum of 1.13. Scholars have reported similar ROA values for Australian firms (Kiel & Nicholson, 2003). The average sales revenue was NZ\$ 283,796 million and the average firm age was 18.04 years.

### 5.3 Results

Table 5.3 presents the correlation matrix. Other than the correlation between Ph D qualification and firm size, none of the correlations are high enough to warrant any problem of multicollinearity.

**Table 5.3: Correlation matrix**

<b>Variables*</b>	<b>ROA</b>	<b>Firm Size</b>	<b>Firm Age</b>	<b>Board Size</b>	<b>Dir Own</b>	<b>CEO Dual</b>	<b>Women</b>	<b>Board meet</b>	<b>PhDs</b>
<b>ROA</b>	1								
<b>Firm Size</b>	0.450	1							
<b>Firm Age</b>	0.157	0.221	1						
<b>Board Size</b>	0.287	0.617	0.328	1					
<b>Dir Own</b>	-0.197	-0.260	-0.059	-0.085	1				
<b>CEO Dual</b>	0.118	-0.186	-0.018	-0.313	0.008	1			
<b>Women</b>	0.226	0.320	-0.006	0.228	-0.239	-0.147	1		
<b>Board meet</b>	-0.144	0.041	-0.004	-0.055	0.003	-0.041	-0.033	1	
<b>PhDs</b>	-0.213	-0.913	-0.056	0.126	-0.060	-0.112	0.212	-0.119	1

\*Sample size (n) = 207 firm year observations during the years 2003 – 2006 or 2004 – 2007, based on the availability of data

Table 5.4 presents the results of Random effects GLS estimation, assessing the effect of board characteristics on firm performance. I developed the models in a hierarchical manner, including one interaction at a time. Table 5.4 gives the values of unstandardised beta coefficients and standard error (in parentheses) along with significance levels of the coefficients. Model 1 is the base line model and Models 2 – 6 are the interaction models. In all the 6 models, I control for firm age and size.

Hypothesis 1 predicted that director ownership is positively associated with firm performance. The coefficient on directorship is negative and only marginally significant ( $\beta = -0.027$ ;  $p < 0.10$ ). This coefficient remains negative in all the models involving interaction terms. Thus Hypothesis 1 is not supported. Hypothesis 2 predicted that CEO duality is negatively associated with firm performance. The positive signed coefficient ( $\beta = 0.235$ ,  $p < 0.001$ ) on CEO duality rejects the hypothesis.

Hypothesis 3 predicted that the number of women directors is positively associated with firm performance. The positively signed coefficient ( $\beta = 0.119$ ,  $p < 0.05$ ) on the number of women directors supports this hypothesis. Hypothesis 4 predicted that the number of directors with PhD qualifications is positively associated with firm performance. The negatively signed coefficient ( $\beta = -0.222$ ,  $p < 0.001$ ) on the number of PhD directors rejects this hypothesis.

Hypothesis 5 predicted that the number of board meetings is positively associated with firm performance. The negatively signed coefficient ( $\beta = -0.094$ ,  $p < 0.05$ ) on the number of board meetings rejects this hypothesis. Hypothesis 6 predicted that there is a positive relationship between board size and firm performance. The positively signed coefficient ( $\beta = 0.216$ ,  $p < 0.05$ ) on the number of board meetings supports this hypothesis.

**Table 5.4: GLS Regression Results**

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>	<b>Model 6</b>
Constant	-0.245 (0.203)	0.394 (0.242)	-0.411 (0.210)	-0.377 (0.214)	1.428 (0.575)	-0.238 (0.223)
Firm Size	0.0147 (0.013)	0.015 (0.012)	0.019 (0.013)	0.016 (0.013)	0.018 (0.013)	0.144 (0.013)
Firm Age	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)
Board Size	0.216* (0.097)	-0.125 (0.120)	0.262** (0.096)	0.280** (0.104)	-0.737* (0.322)	0.215* (0.103)
Dir Own	-0.0267‡ (0.015)	-0.381*** (0.082)	-0.021 (0.016)	-0.026* (0.015)	-0.029‡ (0.015)	-0.027‡ (0.016)
CEO Dual	0.235** (0.878)	0.174* (0.085)	2.248*** (0.547)	0.241** (0.087)	0.199* (0.087)	0.234** (0.088)
Women	0.119* (0.055)	0.107* (0.051)	0.119* (0.0543)	0.668‡ (0.350)	0.118* (0.053)	0.119* (0.055)
Board Meet	-0.094* (0.039)	-0.096** (0.037)	-0.088* (0.038)	-0.097* (0.039)	-0.830*** (0.240)	-0.094* (0.094)
PhDs	-0.222*** (0.060)	-0.211*** (0.056)	-0.222*** (0.060)	-0.205*** (0.059)	-0.216*** (0.059)	-0.238 (0.347)
Board Size*Dir Own		0.193*** (0.044)				
Board Size*CEO Dual			-1.234*** (0.330)			
Board Size *Women				-0.296 (0.186)		
Board Size *Board Meet					0.411** (0.133)	
Board Size*PhDs						0.008 (0.179)
R <sup>2</sup>	0.307	0.402	0.313	0.331	0.343	0.306
Wald $\chi^2$	52.41***	79.41***	66.80***	56.49***	64.40***	51.90***
Change in Wald $\chi^2$		27	14.41	4.08	11.99	-0.51

*Values of unstandardised regression coefficients, with standard errors in parenthesis  
‡ P<0.10, \*P<0.05, \*\*P<0.01, \*\*\*P<0.001; (all two tail tests); n = 207*

Next, I look at the interaction hypotheses. I enter interaction terms one by one in Model 2 to 6. The addition of the interaction terms in different models results in significant improvement in the model fit in four out of five models, as given by significant changes in *Wald Chi-square*.

Hypothesis 7 predicted that firms with higher level of director ownership perform better as the board size increases. Inclusion of this interaction term does improve the model fit and coefficient of the interaction term is significant ( $\beta = 0.193$ ,  $p < 0.001$ ). Hence, Hypothesis 7 is supported. Hypothesis 8 predicted that a larger board will reduce the effect of CEO duality on firm performance. The coefficient of the interaction term in model 3 is negative and significant ( $\beta = -1.233$ ,  $p < 0.001$ ). This provides support to Hypothesis 8.

Hypothesis 9 predicted that as increase in the board size will enhance the positive effect of women members on board on firm performance. The coefficient of the interaction between the number of women board members and board size is not significant ( $\beta = -0.296$ ,  $p > 0.10$ ). This hypothesis was not supported. Hypothesis 10 predicted that as the positive effect of PhD members will be more for firms with larger boards than for firms with smaller boards. The coefficient of this interaction term is positive but not significant ( $\beta = 0.008$ ,  $p > 0.10$ ). Hence the hypothesis is not supported.

Hypothesis 11 predicted that the positive effect of board meetings on firm performance will increase as the board size increases. The coefficient of the interaction term is positive and significant ( $\beta = 0.411$ ,  $p < 0.01$ ). Hypothesis 11 is supported.

## **5.4 Discussion**

This thesis examined the effect of board characteristics on firm performance. I conducted my analysis on a sample of firms listed on New Zealand stock exchange. To

understand the impact of each of the board variables, I have used various board related theories viz., agency theory, stewardship theory, resource dependence theory and stakeholder theory. I argued that some characteristics such as board size, director ownership, women members, PhD members and board meetings will increase firm performance. On the other hand, I felt that the board characteristic of CEO duality will decrease firm performance. I have also used board size as a moderating variable to examine how the effect of other board characteristics is contingent on board size.

The empirical analyses provide mixed results. I found that board size is significantly and positively associated with firm performance. This finding is consistent with many other studies that examined the effect of board size on firm performance (e.g., Klein, 1998; Adam & Mehran, 2003; Anderson et al., 2004; Coles et al., 2008). Board size is considered to increase the independence of the board and counteract the managerial entrenchment (Singh & Harianto, 1989; Zahra and Pearce, 1989).

Director ownership was found to be negatively related to related firm performance contradicting the hypothesis that it would benefit the firm by aligning the interests of both shareholders and directors. It implies that there is agency problem of managerial appropriation. When the moderating effect of the board size is considered, I found that a higher director ownership helps, but only when the boards are of larger size. Increasing the board size is able to deal with the agency problem by alignment of interests of shareholders and directors and improve firm performance. This finding also provides support for stewardship perspective.

CEO duality was found to be positively associated with firm performance. This is contrary to our expectation that CEO duality will lead to agency problems, resulting in poor firm performance. This finding provides support to stewardship perspective that unified board structure provides effective leadership to the organisation (Donaldson &

Davis, 1991; Finkelstein & D'Aveni, 1994; Davis et al., 1997; Charan, 1998). However, when the moderating effect of the board size was examined on the CEO duality-performance relationship, CEO duality was found to be negatively related to performance in respect of firms with larger boards. This result is consistent with findings of Rechner and Dalton (1991) and Kiel & Nicholson (2003). It could also reflect the power that the person holding dual position to sway the board members according to his interests. The CEO holding the position of chair may wield considerable influence in selection of directors of his/her choice, thereby compromising the monitoring role of the board. In such a situation, even if most of the board members are non-executive directors, their role would become hypothetical and the board functions as a rubber stamp board under the total control of the CEO (Rechner, 1989).

One reason for this contradictory finding could be the unique New Zealand context, where board size tends to be very small. In a small board, CEO duality could be quite useful as it provides strong leadership and direction. However, as expected, a larger board dampens the effect of CEO duality. This is consistent with extant literature, which found that CEO duality to be negatively associated with firm performance in large boards (Strickland et al., 1996; Kiel & Nicholson, 2003). The finding from this study also supports Boyd's (1995) conclusion, which states that the issue of CEO duality might be contingent on the company's size and challenges. So, there is value in separating the roles of CEO and board chair as the firm and board size increases.

With respect to gender diversity, I found support to the view that gender diversity leads to superior firm performance. This is consistent with the findings of other studies that examined the role of women on boards (e.g., Carter et al., 2003; Bonn, 2004; Smith et al., 2006). Various studies point out that woman board members contribute to quality of decision making by questioning the conventional wisdom and provoking lively board

discussion (Fondas & Sassalos, 2000; Letendre, 2004; Huse & Solberg, 2006). This finding provides evidence to stakeholder perspective and also to resource dependency perspective that diversity is beneficial to firms. Perhaps women directors can bring their view points more effectively in a smaller board, thereby making effective contribution, rather than in a larger board. It appears that in larger boards, women are constrained or made ineffective by members of other gender. They may not be even have proportional representation as found by Kang, Cheng & Gray (2007) of Australian boards. The findings imply that women members should not be treated as tokens of representation to gender diversity but as a source of invaluable input to the boards, and should be represented in proportion to board size.

With respect to board meetings, surprisingly I found a negative effect on firm performance. This finding is contrary to my hypothesis. However, when I examine the interaction with board size, I do find a positive interaction effect. This suggests that if the board size is small, a large number of meetings may put undue demands on the directors. As the board size increases, there are more heads to share the responsibilities, thereby making the meetings more fruitful for the firm. Given that the board sizes are in general smaller in New Zealand companies, a lack of board resources and competencies in small boards may explain the negative relationship between board meetings and firm performance.

With respect to number of PhD qualified members of board, I found that their presence is negatively associated with firm performance. In addition, I do not find any significant interaction effect of board size on the relationship between Ph D qualification and firm performance. Contrary to conventional wisdom, it appears that PhD qualified members, with skills of research and analysis, do not add any value to firm performance.

Perhaps, what is necessary is not merely a higher level academic qualifications but specific skills such as accounting and finance as found by Yermack (2006).

Overall, the findings from this study indicate that while board characteristics have important implication for firm performance, one can gain a deeper understanding of such relationships by identifying the contingency conditions, on which the relationship between various board characteristics and firm performance may be dependent. In this thesis, I explore the effect of one such contingency factor, i.e., board size, which can explain many unexpected relationships between other board characteristics and firm performance.

## **5.5 Conclusion**

In this chapter, I discussed the results of the data analyses undertaken to empirically test the hypotheses. The results have indicated support for many hypotheses linking board variables to firm performance. Board size was found to moderate many relationships between board characteristics and firm performance. Overall, I found that no single theory offers a complete explanation of board characteristics-firm performance relationship, but rather elements of each theory can be seen to apply in different circumstances. The next chapter will discuss the conclusions, contributions and areas for further research.



## CHAPTER 6

### SUMMARY AND CONCLUSION

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#### 6.1 Introduction

This chapter provides a summary of key findings of the present study. Further, limitations of the research along with contributions of this study are discussed. Finally, suggested directions for further research are offered.

#### 6.2 Focus of this Study

Research on the role of boards was motivated by renewed interest evinced due to recent corporate failures and scandals. Increased attention on accountability and transparency in firms has led to a number of countries issuing corporate governance regulations, codes and principles. Most of these corporate governance guidelines tend to concentrate on the board structure and practices. The underlying assumption is that following these normative guidelines would result in good governance leading to better firm performance.

As an internal mechanism, corporate boards are expected to play a more proactive role in discharging their fiduciary role for improving firm performance. In this thesis, I examined the impact of board characteristics viz., board size, director ownership, CEO duality, women members, PhD members and board meetings. I also investigated the moderating effect of board size on other board characteristics affecting the firm performance, while controlling for firm variables of size and age. To understand the role of boards, I use different governance theories viz., agency theory, stewardship theory, resource dependence theory and stakeholder theory. Based on different theoretical

perspectives and a review of extant literature, I develop a conceptual framework and a set of hypotheses.

The data for this study is taken from publicly listed firms on New Zealand stock exchange during the years 2004 – 2007 and analysed using a firm-year unit of analysis. The statistical method used to test the hypotheses is Generalised Least Square (GLS) Random Effects models as it corrects for omitted variable bias, and presence of autocorrelation and heteroskedasticity in pooled time series data.

### **6.3 Summary of Findings**

The empirical examination of the hypotheses developed from the conceptual framework presented in this study reveals a mixed set of results. Board size is found to be positively associated with firm performance, indicating value of a larger board for the firm. Board size was also found to be positively associated with the firm variables of age and size. Board size was used as a moderating variable to examine the effect of other board variables on firm performance, while controlling for firm variables of age and size. In several instances, board size was found to be positively moderating the relationship between board characteristics and firm performance.

Director ownership was found to have a negative relationship with firm performance, showing signs of entrenchment when the boards and firms are small. This indicates support for agency theory. However, firms with large boards have a significant positive relationship between director ownership and firm performance, providing evidence of alignment propounded by stewardship theory.

With respect to CEO duality, firms with small boards seem to benefit from CEO duality while large boards do not. It means there is support for stewardship theory for

firms with small boards while large boards display agency problems, indicating entrenchment and loss of independence, when one person holds dual positions. It also implies that the context moderates the need for a particular type of leadership structure.

Gender diversity is found to be significantly associated with firm performance. However, the presence of women in a larger board is negatively related to firm performance. I have also found that members with PhD level educational qualification have negative influence on firm performance. However, this relation is not contingent on board size. Finally, I found that board meetings, are negatively related to firm performance but board size moderates this relationship. Board meetings are beneficial in the case of firms that have larger boards.

In summary, I find that board characteristics show association with firm performance. This relationship is moderated by board size and so the context of the firms plays an important role in deciding whether a particular characteristic is beneficial to firms. Therefore, the study indicates the critical importance of the constitution of top management teams for the effective performance of firms.

## **6.4 Contributions**

Several contributions emerge from this research. First, the study contributes to understanding of board-performance link by examining both the traditional variables such as board size, CEO duality, board meetings and other organisational attributes such as gender diversity and competence variables represented by women and PhD holders, respectively. This approach offers a newer light into constitution and functioning of top management teams as strategic decision making groups (Forbes & Milliken, 1999).

Second, to the best of my knowledge, this is the first study to examine the impact of women board members on firm performance in New Zealand. The findings provide evidence that gender diversity in New Zealand boards does contribute to firm performance, though it is negated as the board size increases.

Third, the study found that board size has a moderating effect on other board characteristics providing support to the contingency view regarding the context (e.g., Boyd, 1995; Finkelstein & D'Aveni, 1994; Rhoades et al., 2001).

Fourth, while the conventional wisdom accepts the need for qualifications for board members, the findings from this study do not show any positive link between higher education and firm performance. It points to the need for identifying the importance of firm relevant skill set appropriate for respective boards.

Finally, the study will be useful for practitioners, as the results underscore the need to consider not only the traditional mechanisms of internal board control but also other board characteristics of diversity, qualifications and other competences of the members when constituting the boards. Top teams have to work together to make things happen. For policy makers, these findings suggest that having same set of rules or codes of governance may be counter productive unless the context such as board size and firm size are taken into account. Some prescriptive behaviour or structure may be suitable only in certain context but not in other situations.

## **6.5 Limitations and Future Research Directions**

This study has some limitations. First, the main limitation of the study is that the data was collected through publicly available data sources such as annual reports and other databases. If there are any problems relating to data disclosures or professional

accounting practices, then that would limit the validity of the findings. Second, the entire population comprises of only 156 firms, which is relatively small. Due to data problems, the final set comprised of 207 firm-year observations for 61 firms. Nonetheless, the size of the sample is limited by the number of firms listed on the New Zealand stock exchange in year 2007. Also the external validity of this study is in question, since the data belongs to only New Zealand firms.

Third, it is possible for the observed firm performance to be highly affected by the government regulations rather than a result of board characteristics or its effectiveness. For example, Vafeas (1999) excluded highly regulated financial services and McIntyre et al. (2007) have omitted transportation industry for the same reason. However, in this study, no firms were excluded on this basis and so the results have a caveat on this ground.

Future research should address the limitations of this study. Several extensions to this study are possible. First, I focused only on certain set of board characteristics for their impact on firm performance. While the characteristics covered are important, there are other diversity variables such as age of directors, specialised educational qualifications and ethnicity that could be considered.

Second, women representation was found to be useful in small boards compared to large boards. It appears that as the board size increases, the dynamics of the board are changing resulting to the detriment of the firm. Future research should consider the role of women on boards and dynamics of their presence on the board, which requires an observational and qualitative study.

Third, board meetings were found to be beneficial in large firms but not so in the small firms. Board responsibilities take place not only in meetings but also in committees

and informally before and after these meetings (Carcello et al., 2002). It is beneficial to examine various aspects of committees: how the committees are constituted, if they are substitutes for board meetings, formal and informal functions of committees etc. Findings from such studies will improve our understanding of linkage between board diligence and to the firm performance.

Fourth, this study does not show any positive relationship between PhD qualified board members and firm performance. Yermack (2006) identified that accounting and finance academic qualifications of board members are beneficial to firms in the US. It will be useful to identify the skills and competences that are required of New Zealand directors to add value to their firms. Such study could also consider what combination of skills would be appropriate for different sizes of the firm, as they diversify and become complex organisations. It could also consider the linkage between board skills and internationalisation of firms.

Fifth, the results showing a correlation between board size and firm size are consistent with previous studies (e.g., Gabrielsson, 2007; Coles et al., 2008). However, it will be useful to examine the role of non-executive directors for their contribution to firm strategy and performance as seen in Dalton et al. (1999) and McIntyre et al. (2007). It will also be useful to consider their compensation package and the degree of their independence and how these factors affect the monitoring role of directors.

Sixth, board members composition is changed for a variety of reasons such as member's resignations, infusion of new skills through insiders and outsiders, board diversity etc. Further, the New Zealand Securities Commission has released non binding principles and guidelines in 2004 (NZSC, 2004). After a passage of three to four years, it is about time to examine the effect of these principles on firms adhering to those principles compared to those which ignore them.

Finally, the study has examined the impact of board variables on firm performance, as measured by return on investment. It may be useful to re-examine matter using other market based performance variables such as EVA and Tobin's  $Q$  and compare the relationship (Dalton et al., 1999; Kiel & Nicholson, 2003). This may be particularly useful in a fluctuating market and how firms change the board characteristics in response to change in firm performance.

## **6.6 Concluding Remarks**

To conclude, I believe that the theoretical framework and the findings of my dissertation will stimulate scholars in strategy, organisational behaviour and corporate governance, as well as practitioners, to examine the board characteristics from a multiple theoretical perspectives. Researchers should also consider not only the structure and characteristic features of the top management teams, but also other strategic choices of firms regarding the process and dynamics of functioning of internal governance systems. It is also necessary to examine how these internal governance systems align with the external governance mechanisms to provide for effective performance in a turbulent and competitive global environment.

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